MARCH 25, 1933

Railway Age

FOUNDED IN 1856

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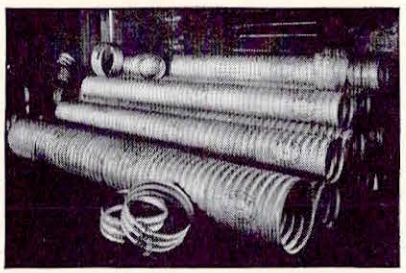
THIS is news—good news! Now, for the first time in many years, corrugated culverts of galvanized genuine wrought iron are again available.

Many engineers will recall the low maintenance cost and long life of wrought iron culverts upon which much of today's metal culvert progress is founded. The value of wrought iron for culverts lies in its known resistance to soil, atmospheric and submerged corrosion plus a characteristic ability for taking a heavier, more adhering coat of galvanizing.

Investigate Byers Genuine Wrought Iron Culverts before making your next purchase. Remember A. M. Byers Company have never manufactured anything other than genuine wrought iron in their sixty-nine years of industry leadership. The wrought iron from which Byers Culverts are made has every virtue you expect in wrought iron plus a new uniformity possible only with modern manufacturing methods and equipment.



Culverts of Byers Genuine Wrought Iron recently installed in New England.

For further information on Byers Genuine Wrought Iron Culverts, telephone any Byers field office or write direct to our Flat Rolled Products Division in Pittsburgh.

A. M. Byers Company, Established 1864. Pittsburgh, Boston, New York, Philadelphia, Chicago, St. Louis, Houston, Los Angeles.

BYERS GENUINE WROUGHT IRON PRODUCTS

PIPE · WELDING FITTINGS · RIVETS · SPECIAL BENDING PIPE · BAR IRON
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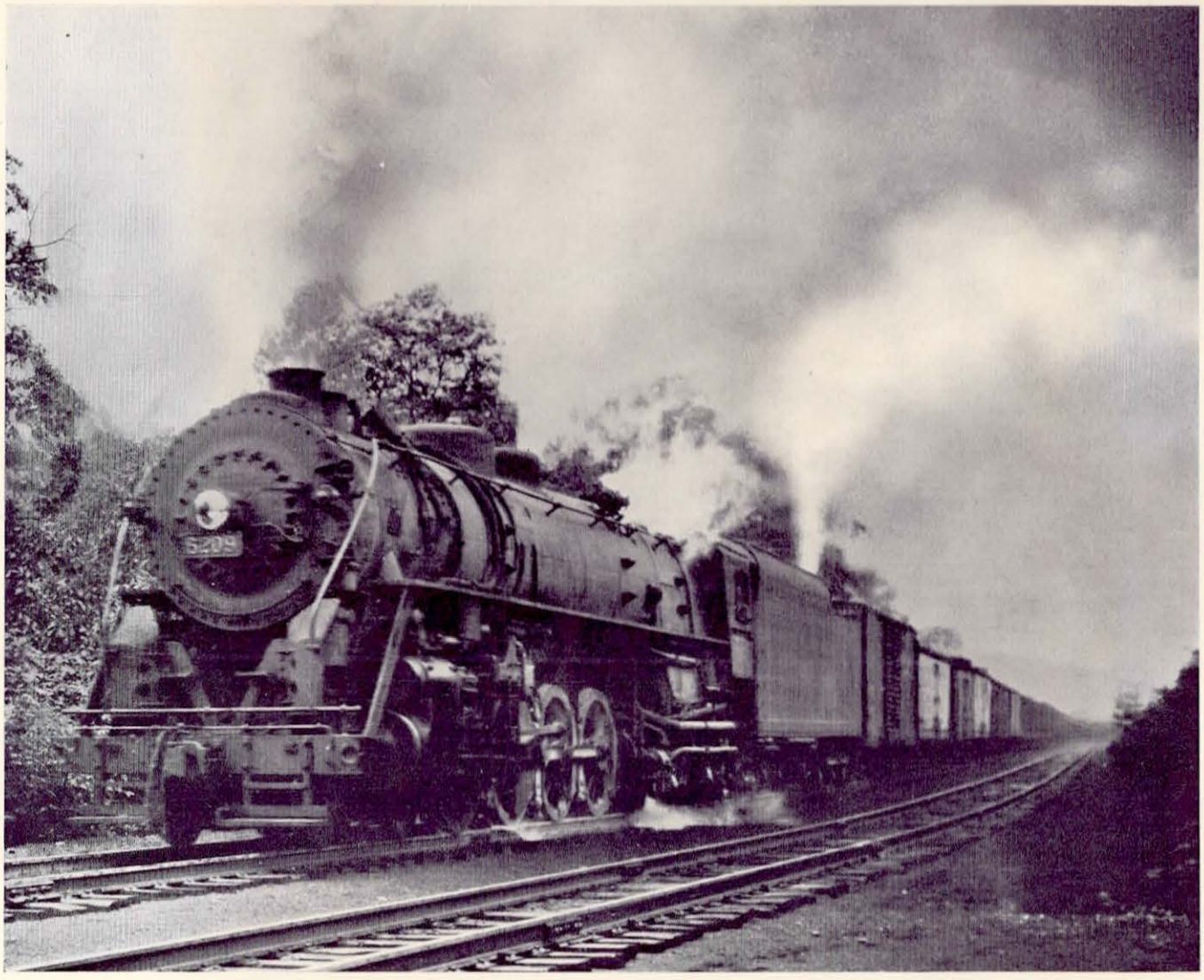
STANDARD of QUALITY for 69 YEARS · · · TODAY BETTER THAN EVER

An Auxiliary-equipped Locomotive



puts its Shoulder to the Wheel

HERE are the advantages to be derived from having high-wheel, fast-freight engines provided with the tractive force of a low-wheel freight engine.

Longer, heavier trains can be started. Wear and tear on equipment is reduced. Ruling grades lose much of their influence on loadings. Much helper service, with its attendant standby costs, is eliminated.

These results can be achieved by installing a Bethlehem Auxiliary Locomotive under the tender. With the 10,000 to 18,000 pounds extra tractive force supplied by the Auxiliary in reserve, the high-wheel engine can buckle down to the job and drag a heavy train over the ruling grade just as well as it can tear along at 60 miles an hour on the level.

It can start, without undue wear and tear on the draft gear, trains of a weight that utilizes fully its tremendous power at road speeds. It can work effectively in slow-freight or passenger service, as well as in the fast-freight service for which it is primarily designed.

The Auxiliary-equipped high-wheel engine is truly universal motive power, and greatly increases the efficiency of railroad operation.

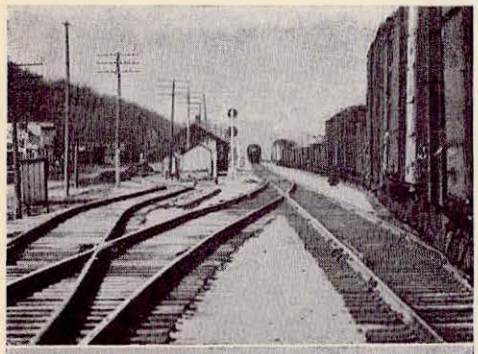
BETHLEHEM STEEL COMPANY

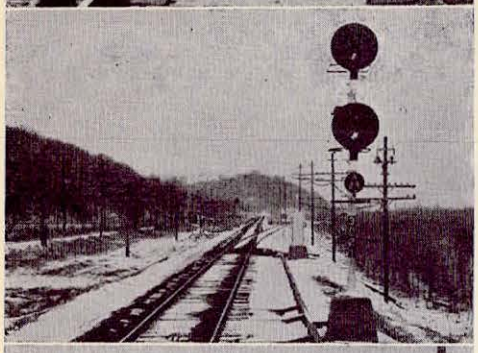
BETHLEHEM STEEL *General Offices:* Bethlehem, Pa.

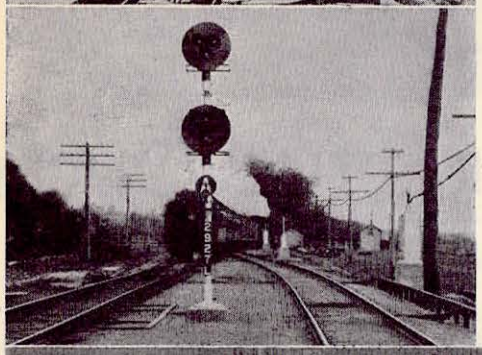
Bethlehem Auxiliary Locomotive

Published weekly by Simmons-Boardman Publishing Company, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879.

ECONOMIZE WITH CENTRALIZED TRAFFIC CONTROL INSTALLATIONS WHICH ARE Self-Liquidating • • • • • •







NUMEROUS installations of Centralized Traffic Control have shown decided improvements in freight-train performance with substantial savings in operating expenses and, on account of the great flexibility of the ac System, have made possible the utmost in operating economies for heavy as well as light traffic.

An official study of a 43 mile, single-track ac installation on a prominent western railway showed the following improvements—

Gross tons per train increased 6 per cent.

Train miles per train hour (speed) increased 47 per cent.

Gross ton miles per train hour increased 57 per cent.

Cost per 1000 gross ton miles decreased 39 per cent.

Locomotive tractive effort 72,300 lbs., no change.

Net return on total investment 14.7 per cent.

Train orders per year eliminated approximately 50,000.

Centralized Traffic Control would probably soon pay for itself on many stretches of your railway. It will pay you to investigate. Our engineers are at your service without obligation.

GENERAL RAILWAY SIGNAL COMPANY

ROCHESTER, N. Y. A-1149

Photo by Ewing Galloway, N. Y.

STANDARD PRACTICE ONCE!

YEARS ago, freight trains of twenty little wooden cars coupled with links and pins were controlled by sturdy brakemen. Ordinary cast iron brake shoes were satisfactory in those days.

But freights now run on fast schedules. Loads are multiplied, brake shoes have much more work to do and ordinary cast iron brake shoes are no longer efficient for this work. They may cost less per shoe but they do not compare with the economy of "Diamond-S" brake shoes per car mile.

If all freight cars, like passenger cars, were equipped with "Diamond-S" brake shoes substantial savings would be made.

THE AMERICAN BRAKE SHOE AND FOUNDRY COMPANY

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332 So. Michigan Ave., Chicago

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Tells of experience to date with the four air-conditioned diners which this road has had in operation since June, 1932.

New Union Inland Freight Station Opened at New York 440

A description of this off-rail facility which serves eight railroads and provides consolidated delivery and pick-up of l. c. l. shipments.

Store-Door Service—Can the Railroads Afford It? 452

J. R. Turney, vice-president, law and traffic, St. Louis-Southwestern, holds that the demand of business that the railroads do a complete transport job is not unreasonable but springs from the service needs of industry.

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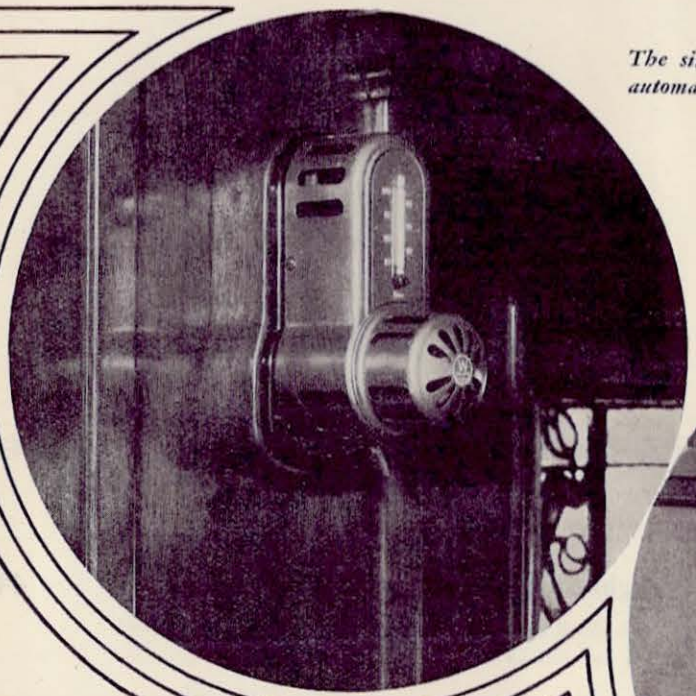
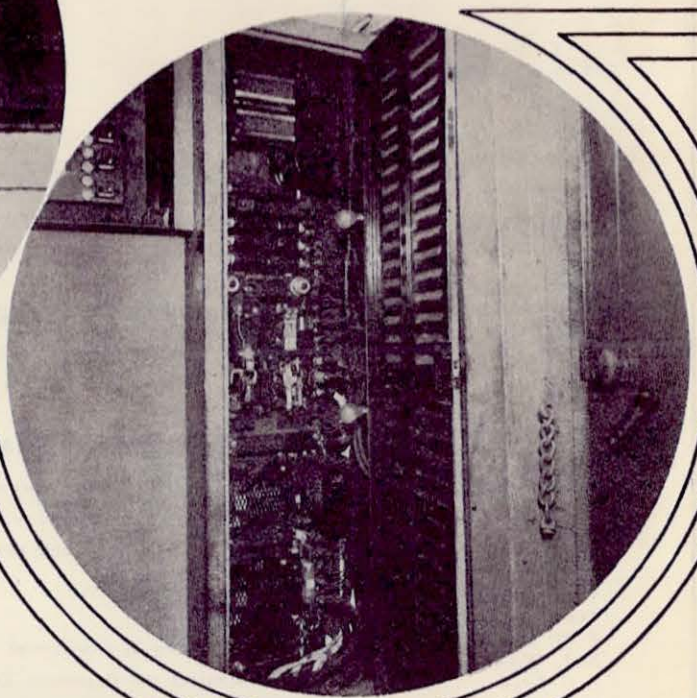
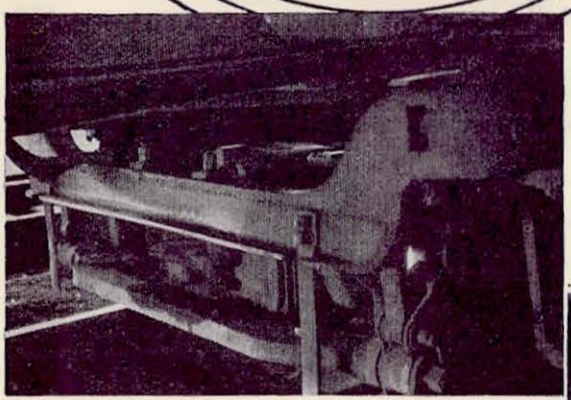
AUTOMATIC



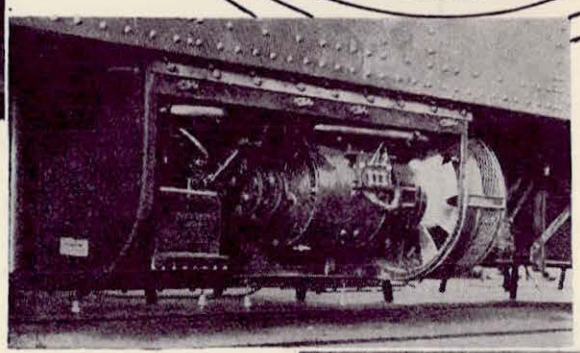
The simple Adjustable Thermostat automatically controls car cooling.

All Control is mounted on panels of convenient size and shape so that it will fit into standard lighting control cabinets.



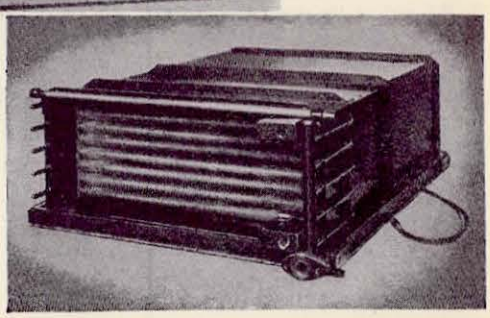


This 15-kw. gear-driven Axle Generator (roller bearing equipped) supplies ample power for air conditioning, car lighting, and battery charging.



Left—The Refrigerating Unit mounts under the car floor. Its a-c.—d-c. motor makes possible the use of terminal a-c. power for pre-cooling of cars prior to departure.

The Air Conditioning Unit, which fits into the car roof, cools, heats, controls humidity, and ventilates.



COMPLETE AIR CONDITIONING

CONTROL MAKES SUPERVISION SIMPLE

WITH

WESTINGHOUSE AIR CONDITIONING

TO insure positive, dependable operation under all climatic conditions, and to reduce supervision to a minimum, Westinghouse Railway Air Conditioning has been designed with the following features of automatic control:

1 Car cooling is automatically maintained between selected limits by an adjustable thermostat located in the car.

2 Heating and humidification, as well as cooling, are automatically controlled and made operative as required in accordance with the findings of a thermal selector. During the heating and humidifying cycle practically constant humidity and constant car temperatures are automatically maintained. By proper setting of the adjustable thermostat, temperature differentials in accordance with the American Heating and Ventilating Guide can be maintained when cooling.

3 The air conditioning load is automatically transferred from battery to generator and vice versa when the cut-in speed of the generator is attained.

4 Generator polarity automatically remains constant regardless of train direction. This is accomplished without the use of electrical or mechanical auxiliaries.

5 The d-c. compressor motor functions automatically as a generator to charge the battery when the refrigerating unit is operating from an a-c. power source. No change of connections is required.

★ ★ ★

On the opposite page are shown the four units which constitute the first and only system of railway air conditioning, complete from rail to roof, built by one manufacturer. It has been thoroughly tested in actual service and is backed by fifty years of experience in the design and manufacture of railroad equipment.

Your Westinghouse representative will help you arrange to inspect this equipment in service.

Mail the coupon below for complete descriptive information.

Westinghouse

Quality workmanship guarantees every Westinghouse product

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Westinghouse Electric & Manufacturing Company
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Gentlemen:
Your Circular 1967 on Railway Air Conditioning, please.

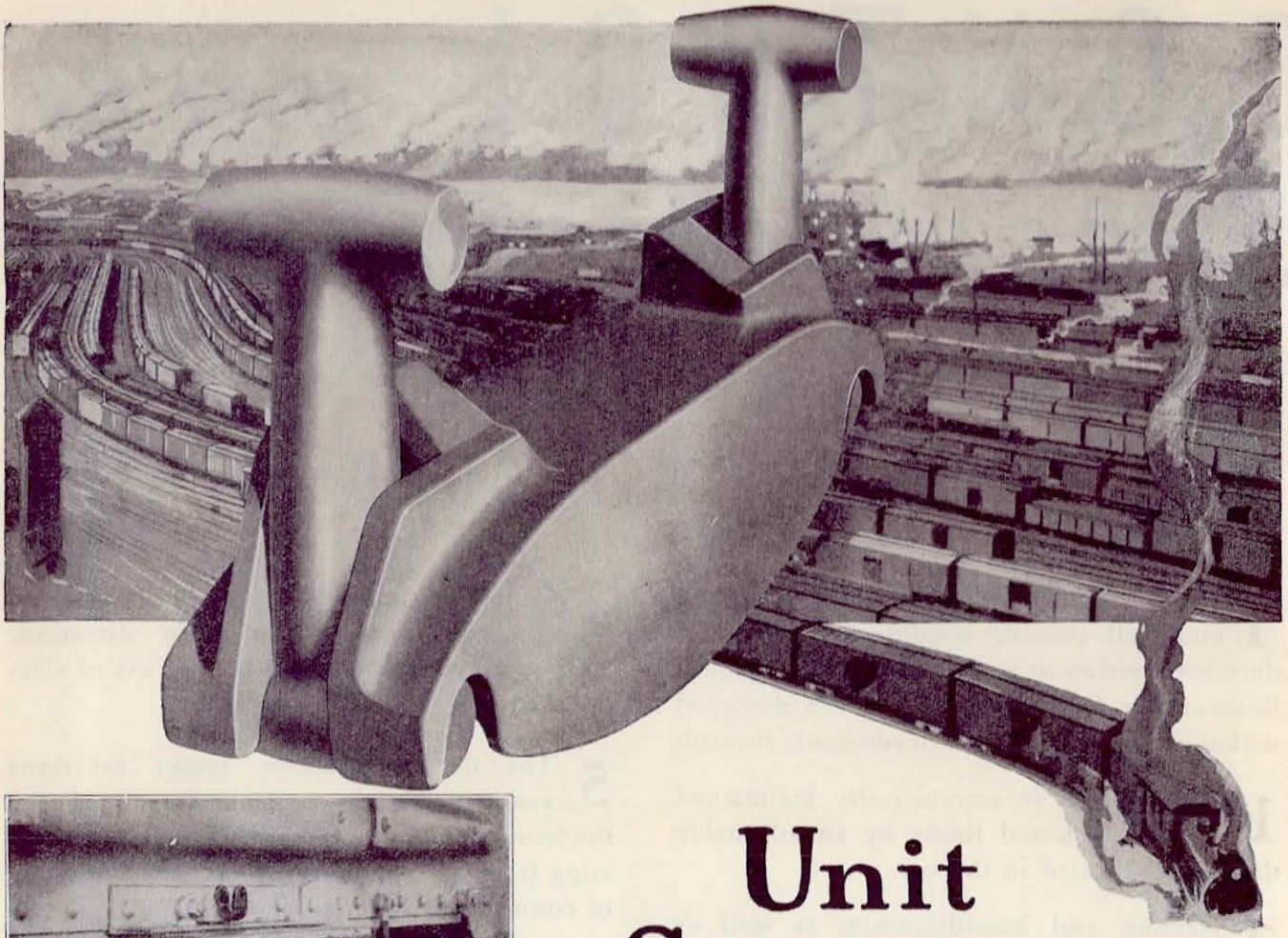
Name.....

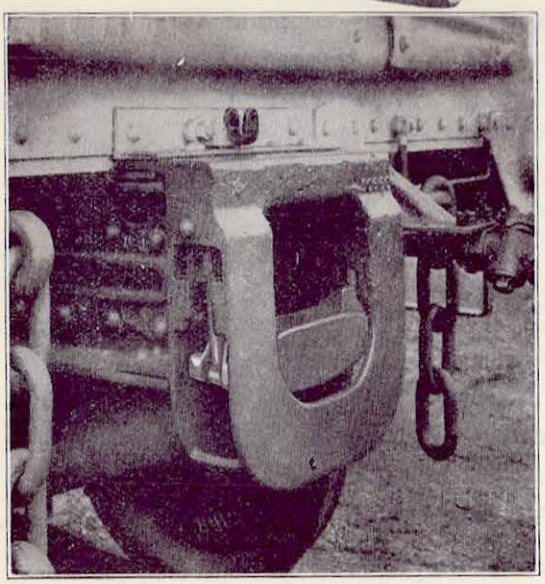
Company.....

Address..... T 79419

City..... *State*.....RA 3-25-33

EQUIPMENT — FROM RAIL TO ROOF





Unit Structure

The striking casting has an integral bottom tie forming a unit structure in which is mounted the swinging Union Centering Device. Together they give the necessary movable coupler support with the solid center sill bottom tie.

UNION METAL PRODUCTS COMPANY

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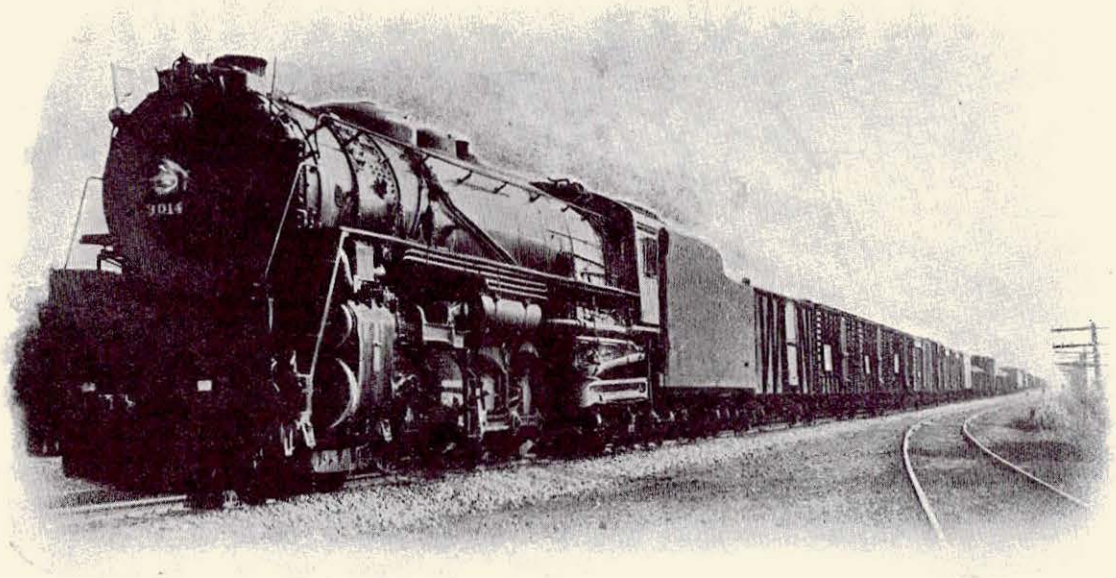

GREATER TRAIN LOADS + HIGHER SPEEDS = INCREASED EARNING CAPACITY

Only one-sixth of the present locomotive inventory—those locomotives built within the past 12 years—can be classed as modern. About 30 per cent are between 12 and 22 years old and are more or less obsolete. Over 50 per cent are more than 22 years old and are entirely obsolete, going back to the era of saturated steam.

High capacity at speed is the outstanding characteristic of the modern locomotive. Great evaporative capacity, high superheat, high steam pressure and large driving wheels are mainly responsible for the great superiority of locomotives built during the past 12 years.

Freight trains today do much of their work at passenger train speeds. Passenger locomotives are required to operate at higher average speeds than ever before and give dependable "on time" service. Only modern locomotives can operate economically on such schedules.

At speeds of 40 miles per hour or over, a modern 4-8-4 type locomotive can haul approximately 20 per cent more than a 2-8-2 type of ten years ago and more than twice the tonnage of a 2-8-0 type of twenty years ago and at a lower cost per ton-mile.

This ability to economically haul greater train loads at higher average speeds improves the competitive position of the railroad and gives increased earning capacity.

More than ever - it takes Modern Locomotives to make money these days!

THE BALDWIN LOCOMOTIVE WORKS

PHILADELPHIA

5 MILLION CAR-MILES

of Proof . .

P C & M C AIR CONDITIONING equipment costs less per car-mile than any other system

More than 5 million car-miles of operating experience on passenger-carrying cars of various types on several different railroads, plus side-by-side comparison with other systems, definitely prove that the operation of **PC&MC** AIR CONDITIONING equipment costs less per car-mile than any other system on the market.

This advantage of **PC&MC** equipment over all other systems is not an accident. It is the result of years of thorough engineering research applied to a background of more than 75 years of railroading experience. The **PC&MC** system is designed to solve for railroad companies the problem of *economical* air conditioning as well as to meet the mechanical requirements of railroad equipment. In addition to showing the lowest operating cost, it is the simplest and most dependable of all air conditioning systems. It has the fewest moving parts. It weighs substantially less.

These advantages are not mere claims. They are demonstrable facts. May we present *all of the proof* and show you why **PC&MC** AIR CONDITIONING equipment assures a better financial return on your investment than any other system?

●

NOTE: Certain operating schedules—particularly short runs—may dictate the use of ice for cooling. If your service requires that type of equipment, or installation of any other type, our experience and facilities are at your command.

P C & M C OPERATING ADVANTAGES

1 The **PC&MC** system has fewer moving parts, which assures dependable simplicity.

2 The **PC&MC** system is backed by 7 years of engineering research—plus 5 million-car miles of actual operating experience.

3 Other systems of equivalent capacity absorb *30% to 67% more locomotive power* than **PC&MC**.

4 Other systems are 50% to 110% heavier in weight than **PC&MC**.

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The Right Springs for Modern Operating Conditions

VIEW IN SPRING PLANT OF AMERICAN STEEL FOUNDRIES

A satisfactory source of supply for new springs and for the reconditioning of old ones is assuming ever increasing importance. Spring service must be dependable.

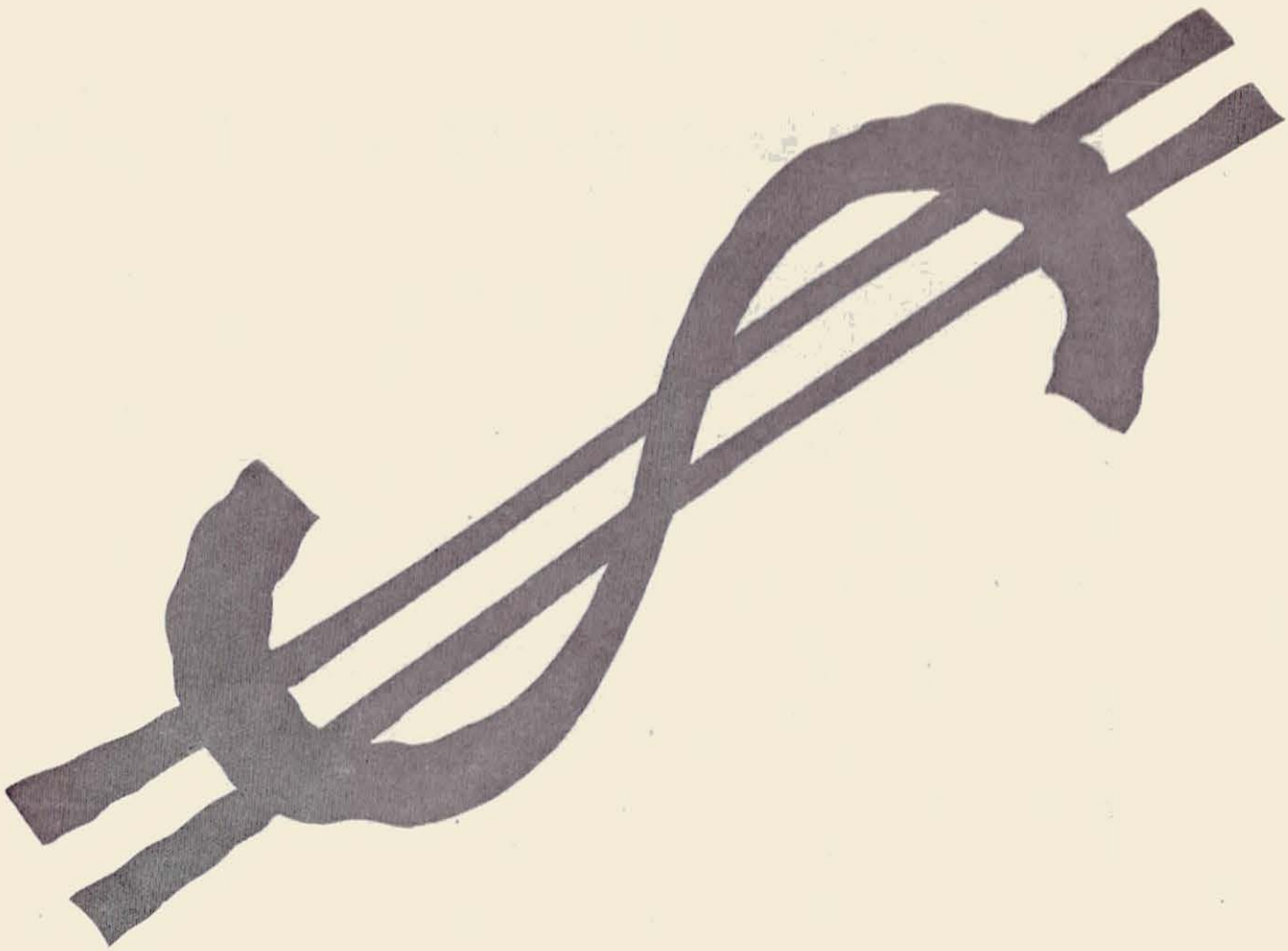
Our Shop, equipped with modern facilities for the double heat treatment of springs to meet the new specifications, assures a quality product.

Old springs returned to be rebuilt are given the same heat treatment as required by the new specifications.

Let us figure with you on the next lot of springs you have to be repaired. You will find the cost will be no greater than in your own shop and you will receive springs reconditioned in accordance with the new specifications and which will play an important part in reducing operating costs.

AMERICAN STEEL FOUNDRIES

NEW YORK CHICAGO ST. LOUIS



S-T-R-E-T-C-H
YOUR CAR-ROOF MAINTENANCE
D-O-L-L-A-R-S

DO not accept car-roof maintenance expenditures as a necessary evil. You can rid yourself of this burdensome expense by equipping your old and new cars with the Universal Dry Lading Roof.

It can be done because it has been done. Here's a good example of how this roof saves money. The cost of roof maintenance over a period of 18 years on 30,000 Canadian National Cars equipped with Dry Lading Roofs amounted to $4,519.49 or less than one cent per roof per year. On another road this roof has rendered twenty years of continuous service without maintenance on double sheathed wooden cars.

These records are splendid tributes to the correctness of design, the durability of parts, serviceability and economy of the Universal Dry Lading Roof.

Hutchins Car Roofing Company

RAILWAY AGE

Leadership in Government and Business

Business men have been crying out for months and even years for the government at Washington to do things to help business. The government at Washington has been doing things so fast for three weeks that it may soon be able, comparatively speaking, to ask many business men why they don't do something to help business.

The government closed the banks to stop the drain upon them, and a large majority of banks have now been reopened under legislation enabling the government to restrict withdrawals which assure their continued solvency. Provision has been made for increases in currency sufficient for all needs, but deposits have increased so much that apparently the additional currency contemplated will be unnecessary. An "economy" bill has been passed which will enable the President to make reductions in bonuses to veterans and in the number and pay of government employees, which will save at least a half billion dollars annually. The economic value of the "beer" bill has been exaggerated, but it will produce additional revenues that will contribute toward the balancing of the federal budget.

All these things and more have been done in accordance with messages from President Roosevelt, who has abolished the complaint that the nation is without leadership. Fear has been replaced with optimism throughout the country. Increase of public confidence has been shown by innumerable public and private expressions and by advances in the security and commodity markets, although some proposed legislation, such as that for farm relief, has been received with misgivings by business.

Business had been trying ever since last summer to revive, but was constantly restrained by the banking situation and lack of constructive action by the national, state and local governments. The volume of business done since July, 1932, has been greater in every month, excepting January, than in that month. As measured by freight car loadings, it averaged 10 per cent more weekly in the seven months ending with February than it did last July, and even in February was still greater than last July, although normally it is less in February than in July, and in February, 1931, and 1932, was 25 per cent less than in July, 1930, and 1931. Following the removal by government action of serious handicaps, the revival of business which began late last summer should accelerate in future unless restrained by other forms of government action less to its liking.

The Function of Business Leadership

While, however, it is the function and duty of government to remove handicaps from business, it is in a capitalistic society primarily and mainly the function of business men, and especially heads of large companies, to manage business—to curb its excesses in periods of prosperity and to revive it in periods of depression. They are employed and paid to lead business, and unless they fully assume and perform the responsibilities and duties of the leadership they have sought and been given, they cause shortcomings and failures of the system of capitalism which invite socialistic agitation and the adoption of socialistic projects. Some disclosures which recently have been made of the dishonorable and cowardly conduct of men in high places in business have put advocates and defenders of the capitalistic system in a position where it is hard for them to throw stones at leaders in public affairs without exposing themselves to stones which may be thrown in reply with damaging effects to themselves, and to the capitalistic system as well. What all the developments have shown is that we need a new kind of leadership in business as well as in government to enable us to pull ourselves out of the bog of depression and upon the solid ground of prosperity.

The first requisite of competent business leadership in a capitalistic civilization is recognition of the elementary economic fact that the effective demand for any particular kind of goods or service must be made equal to the capacity for producing it if that capacity is to be fully utilized. A large production is impossible without a large commerce; commerce is merely trading and consists of buying as well as selling; and it is impossible long to sell large amounts of goods or services without making commensurate purchases from those to whom they are sold. Another elementary economic fact that competent business leadership will recognize is that a dollar invested is just a dollar invested, whether it is a dollar invested by its owner in a private business, or a dollar collected in taxes by the government from a private individual or business and invested

in some kind of public works, and that if in either case it is unproductive it will be so much capital lost.

Selling Must Be Equalled by Buying

When our business leadership recognizes the elementary economic fact that production depends upon commerce, that commerce is just trading disguised as selling and buying, and that it is impossible for any industry or group of industries long to produce and sell a large amount of anything without helping to create a market for its products by buying a corresponding amount of other things, we shall have some important changes in business policies and in the government policies advocated by business.

For example, before the war the United States was a debtor nation and could have what is called a "favorable" balance of foreign trade because it not only had to export enough goods to pay for those it imported, but to export enough in addition to pay at least the interest upon the debts it owed abroad. Since the war it has been a creditor nation, and as long as it continues to be such it must import more than it exports if it is to take in trade from other nations enough goods to balance those it exports and enough in addition to pay the interest and maturing principal that foreign nations owe it. Nevertheless, the business leadership of the country continues to consider as a "favorable" balance of trade one in which exports exceed imports, and to favor a tariff policy which, by restricting the amount of goods that we buy from foreigners, necessarily restricts the amount that we can sell and export to them.

Again, it has repeatedly been statistically demonstrated during the last decade that because of maladjustments of agricultural and industrial prices in the United States the purchasing power of the population of rural communities has been relatively less than before the war. The agricultural population constitutes a very large part of the potential market of the industries of the country, and the amount it can be sold by industry obviously depends upon the amount for which it can sell its products. The business leadership of the country did nothing effective, however, during the recent period of prosperity either to increase agricultural prices to a parity with those of industry, or to reduce industrial prices to a parity with those of agriculture. The result was the curtailment of commerce between industry and agriculture, and "over-production" by both of them, the final outcome being the reduction of industry and its employees to as bad a state as agriculture. Temporarily, the large profits made in industry caused an orgy of speculation and inflated security prices, but this was followed by the collapse of security prices, which was inevitable whenever industry could not find an adequate market for its products.

When Will Industry Begin Buying?

Throughout the depression most business concerns and industries have been proceeding upon the assumption that they would increase their buying as soon as their sales increased. But a sale by anybody necessarily involves buying by somebody of the thing sold. Consequently, it necessarily follows that if everybody waits for everybody else to buy there will be no selling, and the reason why it has been impossible in most lines of business to increase sales has been that those engaged in those lines of business have refused to increase their buying. In the early stages of a depression buying and selling are automatically reduced by economic forces compelling readjustments required to remedy the conditions causing the depression. After a long period of depression, during which the major readjustments of prices and wages required by previous conditions have been made, it becomes the function and duty of business leadership to begin the buying necessary to help revive selling, and necessary, incidentally, to put industrial plants in condition for the efficient and economical conduct of production and commerce.

Buying by many industrial companies heretofore has been hindered by banking conditions and consequent inability to get the means for buying. Banking conditions having now improved, and many companies still having large reserves left over from the period of prosperity, it has become the duty of many leaders of business, or at least of many who are in positions where they should be leaders, to increase buying in order both to put their plants in better condition and to contribute indirectly toward the increase in selling which cannot occur without an increase in buying. This increase in buying should be accompanied by an increase in sales effort to increase the sales of those who increase their buying. As Roger W. Babson has well said, the means of terminating the depression is to be found not in "technocracy," but in "salesocracy," because there can be no increase in buying without an increase in selling.

Government Expenditures to "Help" Business

Throughout the recent period of prosperity there was an orgy of government spending predicated more or less consciously upon the assumption that the more government took in taxes from the public and spent, the more it would increase prosperity, regardless of what it was spent for. Many men who considered themselves business leaders encouraged much of this taxing and spending because they believed it would increase their own profits, and disregarded whether similar expenditures would be economically sound if made in private business. They encouraged large expenditures upon parks, public buildings and public golf courses because they hoped to get contracts for doing the work. They encouraged large expenditures to extend city streets into sub-divisions because they hoped to profit by the anticipated increases in the value of real estate. They encouraged huge expenditures upon highways because they hoped to profit by selling road building machinery and materials and by selling automobiles, buses and trucks to run upon the highways. They encouraged large expenditures upon waterways because they expected to profit by resulting reductions of freight rates, regardless of whether, including the taxes the public would have to pay, the cost of transportation

on the waterways would be greater or less than on the railways. These are but a few examples of the many ways in which business men encouraged large government expenditures in the hope of increasing their own profits and in disregard of the elementary economic fact that a dollar of taxes unproductively expended is as completely lost as if the business concern from which it has been taken had unproductively invested it in its own plant.

It is significant that there was no general outcry from business men against excessive government expenditures and taxation during the recent years of prosperity or during the first year of the present depression. The National Industrial Conference Board in August, 1927, published a volume entitled, "Cost of Government in the United States—1925-1926." In the foreword it said: "It is a strange reflection upon the business sense of our supposedly businesslike American public that until recently even the most elementary and obvious facts regarding the total volume of taxation, public expenditure and indebtedness in our federal, state and local governments have not been available so that the growth in the business of government could not be measured in any comprehensive and regular way from year to year." So many business men were temporarily profiting, or thought they were profiting, by excessive government expenditures that the opposition of business men generally to them could not be aroused until they had helped to bring the economic house down on the heads of everybody.

Leadership on the Railways

The application of all the foregoing to the problems of the railroad and the railroad equipment and supply industries is fairly plain. The railroad supply industry is in its present condition because of the plight of the railroads. The principal cause of the plight of the railroads is that, owing to the decline of their traffic, their earnings have declined during the last three and one-half years almost 50 per cent. The decline of their traffic has been principally due to the depression and to unfair competition, and the depression has been largely due to selfish and incompetent leadership in government and business. The principal thing required to terminate the depression and increase railway traffic is abler and more courageous leadership in government and business. This should include leadership in the railroad industry to help bring about reductions of government expenditures; equality of opportunity for the railroads with their competitors; all the railroad buying practicable to help increase indirectly the sale of railroad transportation; reductions of railway wages; readjustments of rates that will help make it possible to sell more railroad transportation, and increased sales effort to get traffic back on the rails.

Leadership in government has increased and improved. Whether it will continue to be better remains to be seen. In a capitalistic society, however, it is the function and duty of those who have secured positions of business leadership to lead, both in influencing government policies affecting business, and in solving the other problems of business, and they cannot reasonably complain about government policies that adversely affect business unless they do all they can to exert a healthy influence on government policies, and exert ability and courage in trying to solve all the problems of business.

What If the Depression Ends?

In the course of three years of steadily increasing business stagnation the problems created by declining railway traffic and earnings have so largely engrossed the attention of railway officers and supervisors that little time and, apparently, little inclination have been left to consider the future in any light other than as a perpetual depression. So many evidences are accumulating, however, that the spread of business paralysis is checked and that conditions are rapidly stabilizing for an upward turn in the volume of business and industrial activity that it may not be out of place to consider some of the conditions which such an upward turn will create.

During the past three years the railroads have moved the traffic on all of their important lines with their newest and most effective motive power. The steadily declining volume of freight- and passenger-train miles has permitted weeding the older and less efficient locomotives out of the active list and they have been stored in various states of repair. Train operating conditions, as affected by motive power, have thus been uniformly better, probably, than they have ever been before.

The average freight-train load on the Class I railways reached its peak of 1,870 gross tons in 1930. Considering the rapid decline in traffic which took place throughout 1931, the train-load held up remarkably well in that year, averaging 1,823 tons, or only 2.5 per cent less than the high of the preceding year. Freight-train speed, which had been rising steadily but slowly over a decade (the largest annual increase prior to 1930 had been less than 5 per cent), had reached 13.8 miles an hour in that year. In 1931 train speed went up sharply to 14.7 miles an hour, an increase of 6.5 per cent, and made a further increase of 5.5 per cent to 15.5 miles an hour in 1932.

The continued falling off in traffic reduced gross ton-miles to a level at which minimum service requirements no longer permitted further proportionate reductions of train-miles and the train load in 1932 dropped to 1,690 gross tons. But in spite of this sharp drop in train load, gross ton-miles per train hour were the highest in any year except 1931. Such is the standard of service and efficiency developed during the depression.

Since the beginning of 1930 the steady increase in the proportion of deferred locomotive maintenance is partially reflected in the increase in the number of locomotives in or awaiting shops. The largest number of unserviceable locomotives reported by the Car Service

Division in 1929 was about 4,500 at the end of March. By the end of 1930 this number had increased to about 5,100. A year later it was over 6,800. At the end of 1932 it had increased to more than 9,300.

But these figures are in nowise an adequate indication of the extent to which repairs have been deferred. With shops closed for long periods or working short hours, an unusually large proportion of the repair work has been done at the engine terminals and has, of necessity, been largely confined to the lighter class repairs. Hence, a much greater than normal proportion of the large number of locomotives now out of service awaiting repairs practically require rebuilding, including new fireboxes and general machinery overhauling, with heavy renewals of parts which have either been worn out or "robbed" to keep other locomotives in service.

The cessation of the downward trend of traffic thus finds the railways with an excessive accumulation of the heaviest class repairs, with a large number of nominally stored locomotives, most of which are incapable of maintaining the standards of service and operating efficiency established during the depression and which have also been robbed of nearly everything transferable, to keep other locomotives on the active list.

A general increase in traffic, or even a widespread belief in the imminence of such an increase, will create a situation analogous to that which developed following the close of Railroad Administration control in 1920.

The memory of that situation and its aftermath is still fresh. It will be recalled how road after road, finding themselves with an equipment situation no worse than that in existence today and fearing the effect of a sudden return of the anticipated peace-time prosperity, not only employed their own shops to the utmost of their capacity, but also hastily sought the aid of the builders, and even of industrial plants unequipped for dealing efficiently with railway rolling stock, to rehabilitate their equipment. Little need be said concerning the aftermath of investigation and the censure which the superior qualities of hindsight meted out to the railroads who boldly took emergency measures to prepare themselves for an immediate future—which turned out to be the 1921 depression. No doubt many railway officers at that time vowed that they never would be caught in such a situation again. But here we are, after three years of depression, with all of the physical factors set for its repetition. It remains only for the almost certain psychological change to convert them into the same type of emergency which the railroads faced in 1920.

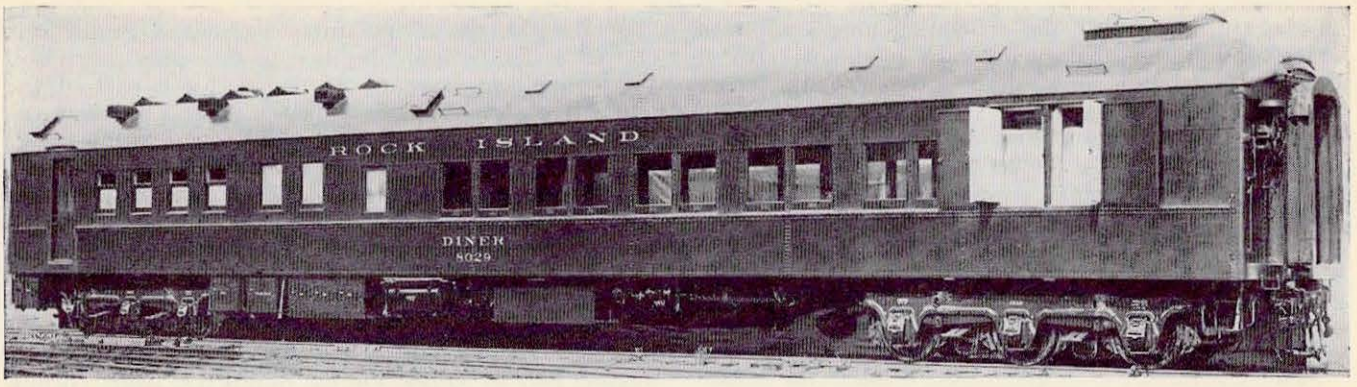
As a people, we in America are subject to tremendous waves of enthusiasm and optimism and to equally deep fits of gloom. However firmly railway managements may resolve to keep their feet on the ground, they will find themselves helplessly swept along on the crest of the first great wave of enthusiasm for the future which may be expected to follow a release from despair. If they do not wish to be swept into costly and unsatisfactory emergency measures, they must squarely face the issues in advance of the event.

Broadly, there are two policies which may be followed in restoring useful mileage in the locomotive inventory. One is that which was followed at the close of Railroad Administration operation of contracting for the rebuilding of the large accumulation of equipment awaiting heavy repairs, including extensive applications of betterments, with a minimum of purchases of new units. The other is to confine rebuilding operations to the best power only, which can be accommodated by the railways in their own repair shops, and to replace the remainder of the mileage needed for the future with new locomotives, completely modern in design and equipment.

It can now be seen that the extensive programs of locomotive rehabilitation which were entered upon following the war have proved a handicap. Under the accounting rules then in effect it was possible to capitalize the heaviest of these rebuilding jobs, thus relieving operating expenses of some of the excessive expenditures for catching up on deferred maintenance. But the new investment thus established has in many cases proved disappointing and it delayed the day when advantage could be taken of the many improvements in the art, the advent of which so characterized the past decade.

A change in the accounting rules no longer permits the capitalization of maintenance expenditures under any circumstances. Even though inadequate depreciation rates may require relatively large retirement charges, such charges will undoubtedly be less than the expense of heavy repairs to many of the older locomotives which have been set aside during the past three years. The saving in the maintenance expenses of the cost of rehabilitating old locomotives, which in many cases approach, and in some cases exceed, the book value of the locomotives, will alone go far toward justifying a thorough house cleaning of the locomotive inventory and its rehabilitation by the purchase of modern motive power. Furthermore, it is only by this method that the high standards of service and train operating efficiency which have been established during the depression can be maintained as the volume of traffic increases. More than half of the locomotives owned by the Class I railways are twenty or more years of age. No freight locomotive over ten years old, and some less than that age, can fulfil the requirements. A return of these old locomotives to service in large numbers will slow up the entire railway operation. The best locomotives will have to follow the pace set by the worst.

Few railroads are fortunate enough to be able to proceed at once, in advance of substantial increases in traffic and revenues, to undertake an equipment rehabilitation program. There seems, therefore, to be little chance of avoiding a mad scramble when the time comes that action can no longer be postponed. The least that can be done, however, is clearly to face the facts and probabilities of the future situation and develop plans which will leave no major questions for decision under the stress of the emergency. Only by that means can a repetition of the hysteria and waste of 1920 and 1921 be avoided.



Rock Island Diner No. 8029 Equipped with A. C. & F. Water-Ice Type Air-Conditioning System—Ice-Bunker Doors Shown Open

Air-Conditioning Results with Rock Island Diners

About 6,000 lb. of ice per car per round trip of 2,400 miles are used in the hottest months at a cost of less than one cent a mile

SINCE the first of June, 1932, the Chicago, Rock Island & Pacific has had in continuous operation four diners on the Golden State Limited, equipped with the Thermo-Gravity ice-type air-conditioning system, developed by the American Car & Foundry Company and described in an article beginning on page 825 of the *Railway Age* issue of May 14, 1932. These diners operate between Chicago and Tucumcari, New Mex., a one-way distance of about 1,200 miles, with a time-table schedule of approximately 28 hours. An examination of the daily and periodic inspection reports covering the operation of these cars indicates that they demonstrated unusually satisfactory results during the summer season of 1932, as regards desired temperature control, freedom from maintenance difficulties and a low average ice-consumption rate of 88 lb. per hr. of scheduled run during June, July, August and September. The cost of ice and the labor of icing averaged 24 cents per hour of scheduled run and 0.65 cents per mile during the same period.

The scheduled time of the round trip, from the time each diner leaves the LaSalle street station, Chicago, until it returns, is 63½ hours, as shown in Table I, but this includes 2¾ hours intermediate lay-over time at Rock Island, Ill., to permit of the car dropping back from train No. 1 to No. 3. The scheduled time of the round trip, excluding dead time at terminals, therefore, is 60¾ hours. After completing a round trip, each diner is held at Chicago until the morning of the fourth day before leaving again, and the total scheduled time per round trip, including all dead time at terminals and lay-over time at Chicago, is 96 hours. The average cost of operating the air-conditioning system, quoted in the opening paragraph, does not include any allowance for maintenance of the equipment which was practically negligible. The power cost for three small motors, aggregating ¾ hp., also was not an important factor. The average cost of ice purchased during the 1932 season was $4.785 per ton.

The Rock Island air-conditioned diners were placed in service in June, the average ice consumption per round trip increasing from 5,105 lb. in that month to a maximum of 6,693 lb. in July, falling off slightly in August, and then decreasing to about half that amount in September, as shown in Table II. Provision is made for the installation of heating coils for winter use, which automatically temper the recirculated and fresh air admitted to the car. The operation of water sprays in the air-conditioning chamber, controlled by a humidistat, maintains the humidity within predetermined limits during both the winter and the summer season. During the four months of air-cooling operation, the temperatures in the Rock Island air-conditioned diners were maintained within desirable limits, based on the American Society of Refrigerating Engineers' comfort chart. Manual operation of the control thermostats was provided by the dining-car stewards. No failures occurred necessitating the withdrawal of the cars from any run

Interior View of One of the Rock Island Air-Conditioned Diners—Cool-Air Outlets Extending the Full Length of the Car on Either Side Are Concealed by Narrow Diffusion Boards Finished to Harmonize with the Interior Decorative Treatment

or the cutting out of the air-conditioning equipment.

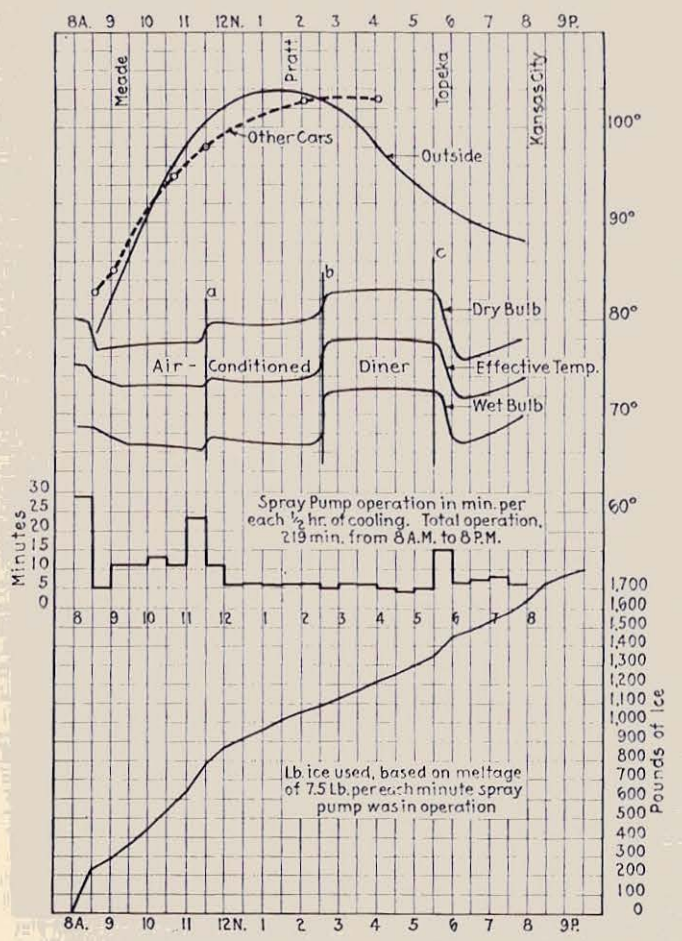
Ice-consumption figures for each month of air-conditioning operation were derived from daily reports transmitted to the accounting department, which calculated the average consumption and cost data. The record for a typical month (August) is given in Table III.

Table I—Schedule of Round Trip Test Run with Rock Island Dining Car 8031—Chicago to Tucumcari, N. Mex., and Return

Left Chicago yards	3:00 p. m. Friday, July 29, 1932
Left La Salle Street station on No. 1	6:00 p. m. Friday, July 29, 1932
Arrived at Rock Island, Ill., on No. 1	9:25 p. m. Friday, July 29, 1932
Left Rock Island on No. 3	12:40 a. m. Saturday, July 30, 1932
Arrived at Kansas City, Mo., on No. 3	9:00 a. m. Saturday, July 30, 1932
Arrived at Tucumcari, N. Mex., on No. 3	1:15 a. m. Sunday, July 31, 1932
Return	
Left Tucumcari on No. 4	6:45 a. m. Sunday, July 31, 1932
Arrived at Kansas City on No. 4	8:15 p. m. Sunday, July 31, 1932
Left Kansas City on No. 4	9:00 p. m. Sunday, July 31, 1932
Arrived at Chicago, La Salle Street station	9:30 a. m. Monday, August 1, 1932

Referring to this table, it will be observed that the average ice, used per round trip, was 5,771 lb. and cost $14.14 plus $2.11 labor, or a total of $16.25. The average ice consumption and the total cost per hour of scheduled run (excluding dead time at terminals) were 95 lb. and 27 cents respectively. During September the average ice consumption and the total cost per hour of scheduled run (excluding dead time at terminals) were 61 lb. and 17 cents, respectively. In this connection, it should be stated that the figures quoted include an accounting allowance of 10 per cent for ice wastage in handling.

On a test run made with Rock Island air-conditioned diner No. 8031, from Friday, July 29, to Monday, August 1, 1932, the temperatures maintained in the car, as well as the time of operation of the spray pump and the ice meltage, were recorded and, for a part of the trip, are shown graphically in the chart. Weather encountered during this run varied between extreme upper and lower limits, affording a real test of the air-conditioning system. When leaving Chicago, the temperatures were almost normal and the cooling system had little work to do, but on Saturday, when passing Herington, Kan., at noon, the outside temperature became approximately 98 deg., and the cooling system was in operation for lunch and for dinner, except for a brief interval between. The temperature in the car during this intermission rose to 90 deg. On the return trip from Tucumcari to Kansas City, the most interesting data were observed from a point just west of Meade, Kan. (reached at 8.00 a.m.) until the train arrived just west of Kansas City (at 8.00 p.m.). The outside dry bulb temperatures, as observed at the station stops, are indicated by the solid line at the top of the chart; the temperatures in non-cooled cars, by the dotted line; and temperatures in the air-conditioned diner, by the three more or less parallel lines.


8A. 9 10 11 12N. 1 2 3 4 5 6 7 8 9P.
Meade
Pratt
Topeka
Kansas City
Other Cars
Outside
Dry Bulb
Air - Conditioned Diner
Effective Temp.
Wet Bulb
Spray Pump operation in min. per each ½ hr. of cooling. Total operation, 219 min. from 8 A.M. to 8 P.M.
Minutes
Lb ice used, based on meltage of 7.5 Lb. per each minute spray pump was in operation
Pounds of Ice
100°
90°
80°
70°
60°

Car Temperature, Spray-Pump Operation and Ice Used During Test Run with Rock Island Air-Conditioned Diner No. 8031 on Sunday, July 31, 1932, from Meade, Kan., to Kansas City, Mo.—Control Thermostat in Air-Cooled Car Manually Adjusted at Points a, b and c

Table II—Cost of Ice and Labor for Icing Rock Island Air-Conditioned Diners During the 1932 Summer Season

	June	July	Aug.	Sept.
Av. ice used per round trip	5,105 lb.	6,693 lb.	5,771 lb.	3,679 lb.
Cost of ice for cooling per round trip	$12.18	$16.13	$14.14	$8.50
Labor cost of icing per round trip	1.80	2.17	2.11	1.56
Total cost of icing per round trip	13.98	18.30	16.25	10.06
Av. ice consumed per hr. (Ex. dead time at terminals)	84 lb.	110 lb.	95 lb.	61 lb.
Av. ice consumed per hr. (Inc. dead time at terminals)	53 lb.	70 lb.	60 lb.	38 lb.
Av. cost of ice and labor per hr. (Ex. dead time at terminals)	23 cents	30 cents	27 cents	17 cents
Av. cost of labor and ice per hr. (Inc. dead time at terminals)	14 cents	19 cents	17 cents	10 cents
Av. cost per mile	$0.0062	$0.0081	$0.0072	$0.0045

It will be observed from the chart that the outside temperature rose rapidly to a maximum of 104, whereas the inside effective temperature in the diner was held almost constant at 73 deg. F. until 11.30, when the control thermostat was regulated to give an effective temperature of about 74 deg. F. and thus provide a smaller differential between the outside and the inside temperatures. At 2.30 p.m., the effective temperature was again raised to 78 deg. F. and at 5.30 p.m., the control thermostat was regulated downward to give an effective temperature of 72 deg. F., in accordance with the decreased outside temperature.

Regardless of how high or how low the temperature and humidity of the outside air was, the conditioned air within the dining car met the requirements as to effective temperature. A feature of the system illustrated by the charts is the automatic control of operation, as shown by the line indicating the time the pumps operate. This operation amounted to a total of 219 minutes in 12 hours, or 30.4 per cent of the elapsed time.

How the Air-Conditioning System Operates

This test on the Rock Island diner showed that the air-conditioning system has a large capacity when conditions demand a maximum amount of work to meet rising temperatures. Yet, when the cooling system is not in operation, no part of the device functions except the blower fan. The low ice meltage secured is not a true index of the capacity of the ice-water system. From the curve showing the spray-pump operation, it will be observed that 11 o'clock on Sunday, July 31, the outside temperature rose rapidly and the spray pump operated for 24 minutes out of 30, indicating ample excess capacity for emergency cooling needs.

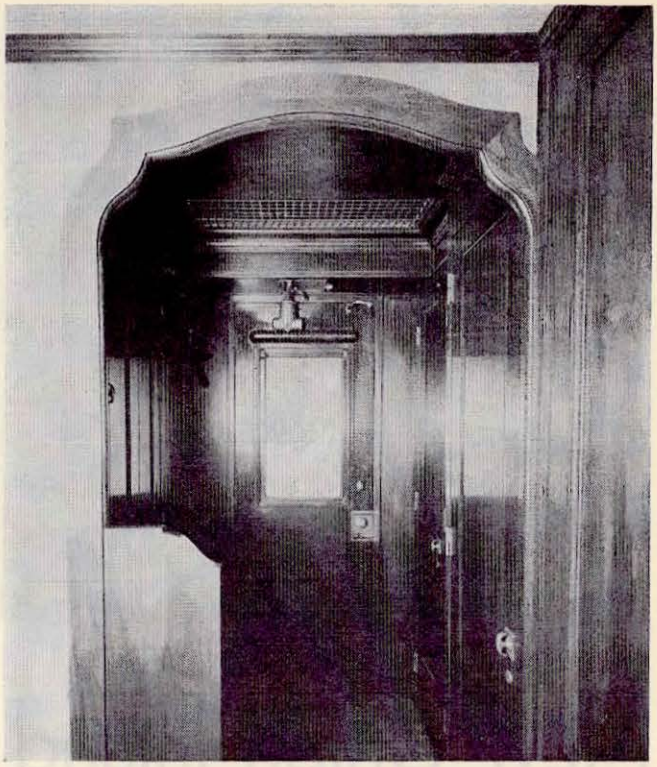
Summarizing the article referred to previously, the A. C. & F. Thermo-Gravity air-conditioning system consists of two primary units, one for the storage of the cooling medium (water ice) and the other for the air-conditioning unit itself. The conditioning chamber is located in the clere-story in the steward's end of the car and is accessible through a hatch in the car roof. This chamber consists of the waste-water cooling coils, cooling sprays and cooling coils. By means of a cooling spray, with water at 40 deg. F., the air passing through the air-conditioning unit is de-humidified in summer, or, with water at 60 deg. F., humidified in winter, in accordance with maximum comfort requirements. Through a patented arrangement of utilizing the heat-absorbing capacity of the cold waste water by passing it through an additional cooling coil in the air chamber, its equivalent in ice is saved and the efficiency of the entire system is improved.

The ice-storage unit stands on the floor of the car against the side wall below the conditioning chamber and ice is charged from the side of the car slightly above the floor level through double doors on the outside of the car. This location of the ice chamber gives a close proximity of the cooling medium, ice, and the conditioning unit, with resultant lowering of heat losses in handling the cold water. Water for washing, cooling, humidifying and de-humidifying the air is supplied to the air-conditioning chamber from the reservoir of the ice-storage unit by means of water pumps located on the floor of the car under the ice-storage chamber.

Water ice, the heat-absorbing medium, preferably in 300-lb. blocks, is loaded into the ice bunker through the ice doors in the side of the car from platform trucks, or at regular icing stations at railroad terminal points. Due to low ice consumption, coupled with large ice-box capacity, in most cases except that of very long runs, it is necessary to fill the ice bunkers only at the terminals where the train is made up. The Rock Island diners hold eight 300-lb. blocks of ice per car and, except under extreme conditions, have been able to complete a run between Chicago and Tucumcari with only one icing between terminals.

Table III—Cost of Icing Rock Island Air-Conditioned Dining Cars in August, 1932

Round Trip Date	Car Number	Ice Furnished Enroute, lb. Hering-ton	Pratt	Total Ice Incl. Full Re-Icing at Chicago and Tucumcari lb.	Cost of Icing Ice	Labor	Total
1	8029	1,155	....	4,950	$12.13	$1.58	$13.71
2	8031	1,485	....	5,390	13.21	1.77	14.98
3	8028	1,897	....	5,417	13.27	1.87	15.14
4	8030	2,310	1,320	7,315	17.92	2.45	20.37
5	8029	1,430	330	4,867	11.92	2.38	14.30
6	8031	1,155	....	4,675	11.45	1.87	13.32
7	8028	1,485	....	5,500	13.48	1.87	15.35
8	8030	1,320	2,750	8,745	21.43	3.06	24.49
9	8029	2,310	990	7,150	17.52	2.38	19.90
10	8031	1,980	....	5,637	13.81	1.77	15.58
11	8028	1,650	....	5,417	13.27	1.87	15.14
12	8030	2,310	660	7,810	19.13	2.28	21.41
13	8029	990	2,640	5,390	13.21	1.38	14.59
14	8031	990	660	5,665	13.88	2.19	16.07
15	8028	2,310	660	6,435	15.77	2.38	19.15
16	8030	2,640	1,980	9,185	22.50	3.23	25.73
17	8029	1,320	....	4,290	10.51	1.77	12.28
18	8031	660	....	3,025	7.41	1.79	9.20
19	8028	1,732	330	4,867	11.92	2.28	14.20
20	8030	1,980	1,650	7,370	18.06	2.89	20.95
21	8029	1,787	....	4,592	11.25	1.76	13.01
22	8031	1,980	....	5,335	13.07	1.87	14.94
23	8028	1,650	....	5,005	12.26	1.87	14.13
24	8030	1,650	1,980	7,260	17.79	2.89	20.68
25	8029	990	660	5,775	14.15	2.19	16.34
26	8031	1,595	....	5,555	13.61	1.87	15.48
27	8028	1,265	....	5,280	12.94	1.87	14.81
28	8030	2,310	990	8,415	20.62	2.38	23.00
29	8029	1,650	990	5,610	13.74	2.38	16.12
30	8031	1,485	....	3,905	9.57	1.87	11.44
31	8028	....	....	3,080	7.55	1.49	9.04
Total				178,912	$438.35	$65.50	$503.85
Average per round trip				5,771	$14.14	$2.11	$16.25

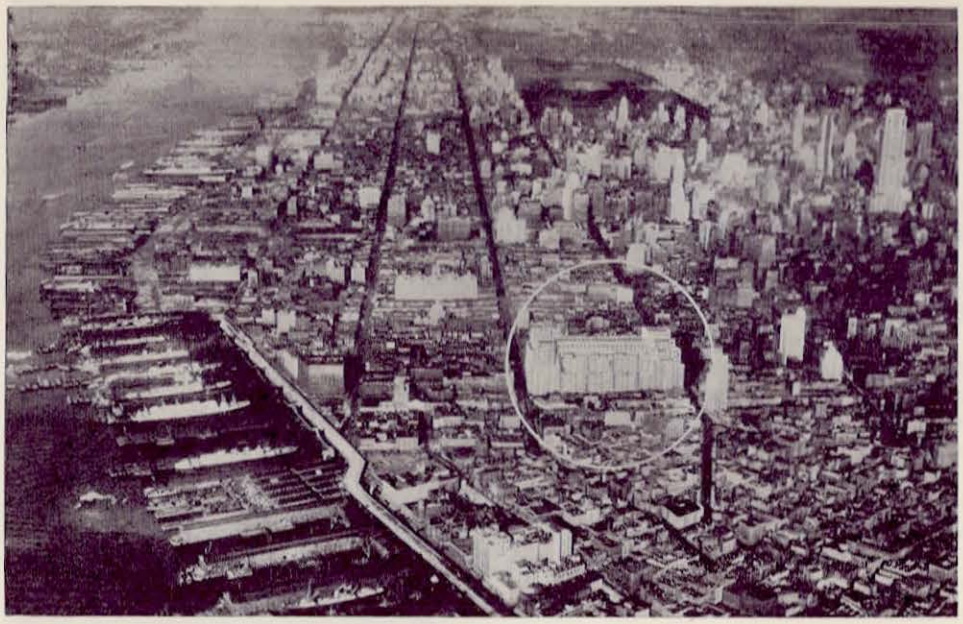


View Showing Recirculating Air Grill in the Ceiling at One End of the Rock Island Air-Conditioned Diner

The apparatus includes provision for admitting any desired proportion of filtered fresh air in the make-up chamber up to 25 per cent of the total air circulated in the car. Operation is controlled by means of a centrally located thermostat which automatically maintains temperature and humidity at a predetermined value for which the thermostat has been set. The system is so designed that the two primary units are complete with all the devices and parts required for their operations. In other words, the ice-storage unit is so built that in the space occupied by the unit is contained the cold-water reservoir, the water pumps complete with motors, and sprays for passing recirculated water over the ice blocks, all of which have their proper electrical and pipe connections.

The conditioning chamber is also a self-contained unit, consisting of an air-mixing chamber, fin cooling coils, spray nozzles, blowers, and necessary electrical and pipe connections. The provision of self-contained units leads to a relatively low cost of installation, since all that is required for installation in a car is that of application of the unit, air ducts, air intake, and proper electrical connections. Since all mechanical parts are of low power consumption (⅙-hp. overflow-pump motor, ¼-hp. spray-pump motor and ⅓-hp. double-blower motor), no additional battery or generator is required other than that which is on the car before application of the air-conditioning equipment. The apparatus requires a maximum of 25 amp., 32 volts d.c., with an average full load of approximately 20 amp.

With only one, or at most two, intermediate reicings per trip of 1,200 miles, experience on the Rock Island indicates that the water-ice type of air-cooling and air-conditioning system, as installed in the four Rock Island diners, has provided effective and reliable control of air conditions at a cost for ice and the labor of icing, as quoted, and a practically negligible cost for power and maintenance.



Aerial View of a Section of New York Showing the Location of the New Union Inland Freight Terminal at Fifteenth and Sixteenth Streets, with Respect to the Uptown Business District and the North River Water Front

New Union Inland Freight Station Opened at New York

This off-rail facility, housed in the city's largest building, serves eight roads and provides consolidated delivery and pick-up of l. c. l. shipments

ON December 31, 1930, the eight trunk line railroads serving New York City entered into an agreement with the Port of New York Authority for the construction and operation of the first of three large inland union freight stations on Manhattan Island, and on October 1, 1932, the first of these stations, housed in the largest building in the city, the new Commerce Building of the Port of New York Authority, was placed in service. This new freight facility, which is unique in many respects, is essentially a two-level, off-rail union freight station for the handling of l.c.l. shipments, occupying the ground floor and basement of the new Commerce Building, which is 16 stories high. Thus, there are combined in the one building union freight handling facilities and 15 floors of air-rights development designed to meet the requirements of practically any form of commercial or industrial enterprise.

Pennsylvania Motor Unit About to Leave a Trailer at the Station for Unloading, Entirely in the Clear of Street Traffic

Many Advantages Held Forth

The new inland terminal was conceived by the Port Authority mainly to achieve two principal purposes; first, to relieve congestion in the streets of the city and especially about the railway piers along the waterfront, and second, to afford a facility which would reduce the transportation expenses of local merchants and industries, and, eventually, prove of benefit to the railways as well. For the present there will be no economy for the roads participating, since it will be necessary for them to maintain their present pier facilities, awaiting the full development of the Port Authority plan for two more inland stations.

The new terminal is located about midway between lower Manhattan and the principal business section of up-town New York, in an area which is singularly devoid of railway freight-handling facilities, and which, at the same time, is said to be the largest package freight center in the world. Specifically, the new terminal is located between Eighth and Ninth avenues on the east and west, and Sixteenth and Fifteenth streets on the north and south, in one of the largest blocks in the city. This block is 800 ft. long by 206½ ft. wide.

With practically all of the roads serving New York largely by means of their individual piers, widely scattered about New York harbor, shippers and consignees within the city have been forced into extensive trucking operations in making deliveries to and collections from the different railways, causing not only serious congestion in the streets and along the waterfront, but also

expensive delays to trucks and their drivers at the piers in disposing of and picking up consignments. Under the arrangement provided in the new union inland freight station, all shippers who so elect can deposit at the new station shipments for any or all of the roads entering the city, and likewise, can pick up at the station, and at one tailboard point, all freight consigned to them, regardless of the road making delivery.

The different roads operate automotive shuttle service between their piers or rail heads and the terminal; they classify and group all incoming shipments for individual consignees; and, likewise, they classify and group all outgoing freight, from all shippers, according to the specific roads which are to handle them. All railroad trucking to and from the station is being done under contract, while the consolidated freight handling functions within the station itself are being handled under the direction of a board of managers, which consists of a representative from each of the participating roads.

The Port Authority Commerce Building is of steel and reinforced concrete construction, 800 ft. long by 206½ ft. wide, faced on all four fronts, above a three-floor limestone base, with a selected brick in a range of reddish brown colors, trimmed with terra cotta copings and finials. The main portion of the ground and basement floors is given over to the union inland freight station, which is designed to be served exclusively by automotive equipment, while the upper floors are of semi-loft construction, adapted for practically any class of manufacturing, assembly or distribution, with supporting offices and display areas. Both of the avenue ends of the building at the street level are designed for occupancy by stores or other public facilities, while the upper floors at both of these ends are laid out primarily for high-class office space, either independent of or in connection with occupancy in the loft area of the upper floors.

The union freight station facilities are reached by trucks, both at the street level and in the basement, the basement being served by ramps at each end of the building. Tenants in the loft areas of the upper floors have direct elevator connection with the two levels of the freight station, and, in addition, are served by large elevators at each end of the building, capable of handling the largest and heaviest trucks and trailers. These latter elevators run from the street level, where they are served by tenants' private truck entrances, to the basement and to all of the upper floors of the building, each of which is provided with a depressed truck lobby where as many as four or five trucks can load or unload at one time.

Details of Freight Handling Facilities

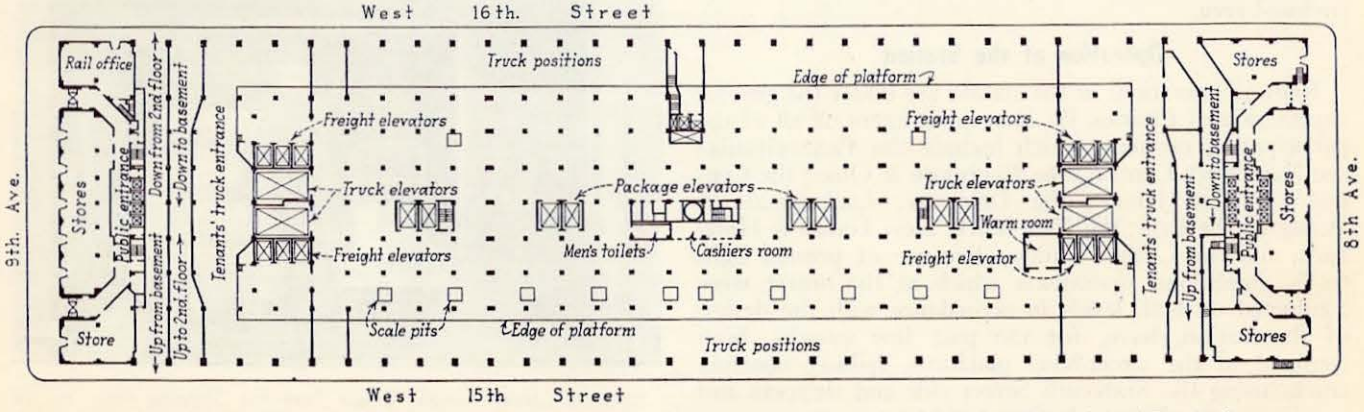
As pointed out, the union inland freight station occupies only the ground and basement floors of the building.

A Large Cashier's Office Facilitates the Handling of Bills and the Payment of Freight Charges

This space, however, comprises some 215,000 sq. ft. of platform and driveway areas. The ground floor, which is designed primarily for the consolidated delivery and pick-up of freight by shippers and consignees, is essentially a freight handling platform at tailboard height, about 478 ft. long by 150 ft. wide, flanked on both sides by marginal back-up space on a level with the street pavement. The back-up areas for trucks, which will accommodate 82 trucks at a time, are 28 ft. deep, sufficient to provide for the under-cover loading or unloading of the largest trucks and truck-trailer combinations.

The freight platform of the first floor, which is of reinforced concrete construction with a wood block wearing surface, is one continuous area, obstructed only by columns of 22-ft. 9-in. centers and by special equipment for the handling of freight, such as elevators, scales and a cashier's office. The basement floor, which is designed for the single dump and pick up of freight by the eight different roads using the station, is of much the same general design as the ground floor, consisting essentially of a main central platform flanked on both sides by marginal driveways and back-up spaces. As in the case of the street floor, the basement platform area is obstructed only by columns on wide centers, package elevators, a cashier's office, and by certain other auxiliary facilities such as toilets and platform scales. This floor is served by two one-way ramps at each end, which afford the railway trucks unrestricted access to and from the street.

All together there are eight package elevators connecting the basement platform with the street-level platform, these being grouped in pairs and spaced uniformly throughout the length of the platforms to minimize trucking. Each of these elevators has a platform area of 10 ft. by 16 ft. and a capacity of 12,000 lb. The tenant truck elevators, which travel from the basement



General Floor Plan of the Street Level of the New Commerce Building at New York Occupied by the Union Inland Freight Station

Tractor-Trailer Equipment Speeds and Facilitates the Handling of Freight

to all the upper floors of the building, are four in number, two being located toward each end of the building. These elevators, which have the unusually large platform area of 17 ft. by 34 ft., have a capacity of 40,000 lb. each. Twelve freight elevators connect the basement with all the upper floors, six of these being located at each end of the building flanking the truck elevators. These elevators, by means of which freight is handled between the floors of the freight station and the upper floors of the building, each have a platform 9 ft. by 14 ft., and a capacity of 10,000 lb. All of the elevators mentioned are electrically operated, with self-leveling mechanisms and push-button control.

The office and clerical facilities in connection with the union freight station are all located at the Ninth Avenue end of the building, in the basement, and on a mezzanine floor between the first floor and the basement, with the exception of a public freight office on the street-level floor at the corner of Ninth avenue and Sixteenth street. The principal office facilities are located on the mezzanine floor referred to and include executive and clerical offices, a general office, a private office for the joint agent, and such auxiliary facilities as a locker room, a file room and a telephone room. The facilities in the basement include mainly a railroad lunch room, a locker room, a record storage room and an area for O. S. & D. storage.

The main freight-handling areas of the station are not heated, and, for this reason, these areas are provided with a dry pipe sprinkler system instead of the wet pipe system installed in the rest of the building. The street level area, which is open on both sides, is adequately ventilated, while in the case of the basement, forced ventilation is provided to insure good air conditions, particularly because of the operation of trucks in this enclosed area.

Operation at the Station

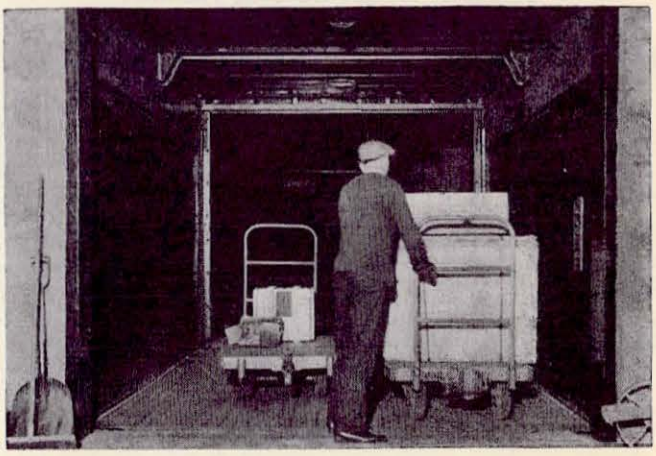
Railway operations at the station are under the general supervision of Charles W. Rau, joint agent of all of the participating carriers, which include the Pennsylvania; the New York Central; the Baltimore & Ohio; the Central of New Jersey; the Delaware, Lackawanna & Western; the Erie; the New York, New Haven & Hartford, and the Lehigh Valley. Because of present light traffic conditions, operations which at the outset were conducted on both levels in accordance with the design of the station, have, for the past few months, been confined to the street-level platform, railway contract trucks using the Sixteenth Street side and shippers and consignees the Fifteenth Street side.

As shippers' trucks enter the station, bills-of-lading and accompanying documents are handled by a master receiving clerk, and are verified to insure routing via the intended initial carrier. No shipment is accepted unless the initial carrier is specified. The station employees are not authorized to do any routing. Next the documents are time-stamped to show when the consignments are offered for shipment, and a check of verification, prepared by the master clerk, shows the station pro-number, which latter is also stamped on the shipping order. A receiving clerk, stationed at the tailboard of the shipper's vehicle, offers the customary signature for freight received.

Tractors and trailers are used for moving freight about the platform. Shipments brought in in shippers' vehicles are immediately sorted and placed on trailers for distribution to the shuttle motor trailers operating from the opposite side of the platform to the different rail heads. For accounting records the tonnage is drawn from shipping orders, and, because of this, the shipping orders and the freight represented by them must part upon the completion of the receiving clerk's work. The shipping orders proceed to a tonnage clerk where the tonnage is drawn off and where they are sorted according to initial carriers. In separating shipping orders from the shipments, the check of verification is left to accompany the trailer and the shipment. With the loading of the freight from a trailer to a railroad truck, the check of verification checks the shipment into the particular vehicle until loading is completed. The verification checks, representing a load, are then returned to the tonnage clerk where they are matched with the shipping orders and pouched, thereafter accompanying the shipment to rail head. Thus the movement of outbound business through the station is not hampered by lengthy detail while, at the same time, adequate records are made available for future reference.

Special Services Offered Inbound Freight

Inbound business is received from railroad trucks at the Sixteenth Street side. Here it is checked off the vehicles and assembled alphabetically by consignees for distribution. A load from the pier or rail head is accompanied by the waybill, delivery receipt and cashier's memorandum. These proceed to the cashier's office where they become available to consignees upon payment of charges. In calling for freight, shippers back their trucks against the ground floor platform on the Fifteenth Street side of the station, proceeding thereafter to the cashier for the payment of freight charges. Delivery clerks are available at different sections of the platform



Elevators Convey Freight Direct from the Shipping Floor to the Leased Loft Floors Above

and, upon presentation of the receipted freight bills, deliver to the consignee the freight specified thereon.

A special station service is offered in which freight is moved from its position on the platform to truck tailboard for 1½ cents per 100 lb., with a five-cent minimum per shipment, or, as an extension of this service, it will be placed on the truck for an additional one cent per 100 lb. This service, however, is entirely optional, as the shipper may transport his freight from its resting place on the platform to his vehicle, in which case no charge is assessed. Also, he is permitted to use station equipment, other than power equipment, for this purpose.

It is pointed out in connection with the foregoing that the station is adaptable to methods of operation entirely different from that now employed, and it is, therefore, not unlikely that, as policy, experience and increased business dictate in the future, parts or even the entire present method may be abandoned for something better, including, of course, the use of both station levels.

The consolidated receiving and delivery plan, which gives this station its unique position in the transportation field, has been received favorably by those shippers who have thus far used the facilities. While the tonnage passing through the station at present is by no means great, or in reasonable keeping with the size of the station, it has been noted that once a patron uses the station he continues to do so thereafter. It is said that a number of new truckmen are appearing at the Fifteenth Street platform every day, each carrying the freight of one or more shippers.

The plans for the new Commerce Building and its union freight facilities were developed under the immediate direction of J. C. Evans, terminal engineer of the Port Authority, co-operating with representatives of the various interested roads. Abbott, Merkt & Company, New York, were retained as engineer-architects in the design and erection of the structure, while the Turner Construction Company was the general contractor for the building proper.

How to Approach the Railroad Problem*

By F. E. Williamson†

THE railroads are under competitive pressure, not acutely felt until this depression, but which has probably been quietly generating itself for the last 15 years. Prior to that time, the railroads, as a whole, had a seller's market. This is no longer true. We have splendid railroads, built for heavy loads, locomotives that can haul a mile of cars, and we have half a mile of business. There are potential competitors, other than railroads, for a great deal of the business that we had. They have some advantages which we do not share. These may become justly equalized in respect of regulation, taxation and equality before the law. Even then it is quite obvious that there is need to shape the railway plant and service to better advantage in this competitive field.

Main and Branch Lines Contrasted

The rapid decline in business in the past three years has brought out the contrast between important main routes, on the one hand, and lateral and branch lines on the other. Our main lines today are still performing the general range of service that has been customary. It is true it has diminished in volume, but there seems no good reason for believing that to be a permanent change. The decrease is more a reflection of the general state of business of the country. The future volume of business for a considerable quantity of lateral and branch lines is, however, not so clear. The local business which once largely contributed to their earning power has been the subject of serious inroads from motor competition, operating on improved highways. While the equilibrium resulting from a rationalizing of railway and motor transport has probably not been disclosed we have no definite measure of the extent to which such disclosure or even the resumption of general business, might help these lateral and branch lines. In many cases it is an involved question requiring close study and perhaps further experience.

It would seem that the first step is to determine with more or less accuracy the character of service that can be expected to survive on such lines and to adjust the physical standard of maintenance accordingly. In other words, it seems essential that the railway mileage that is eligible for an unrestricted variety of traffic ought to be confined to such parts of the mileage as are obviously now performing such character of service and likely so to continue. In this way your problem may be classified to advantage, both in the conduct of the work and its cost.

A Study of Relationships

Railroad transportation cannot be effective without motive power. We know as yet no way whereby it can be effective without cars and road. The investment in these physical factors is so interrelated that an important change in one affects the other. These changes and the effects are functions of speed, weight and character of service, whether local to the line or general. The effect of the character of service upon the physical standard is worthy of deep study. So is the effect of the standards of motive power, equipment and road, each upon the other. I do not mean that these have not been studied and may not be well known. What I do mean is that there is a great margin of study that may be given to these relationships under the new conditions disclosed to us by the present; first to produce a more definite consciousness in our minds as to these relations, and, second, to pursue the objective that shall conserve the value (or investment) in what we have to more productive ends.

There are many striking instances where road investment in railroads has been conserved both in physical standard and service of capital. New and enlarged service and better results have been yielded with a minimum increase in fixed investment. Objectives may have been truly forecast or the interrelated factors may have been subject to more definite control in their reactions upon the plant investment. It may be that peak loads, either of business cycles or of seasonal variations, have been met by effort rather than by investment. Effort, of course, has the duration of the peak load. When met by investment, that burden has a continuing duration, supported only by peak load. Generally speaking, investment in plant so founded can be adequately satisfied only by adequate business volume.

What the Patrons Want

It seems patently desirable to work towards an end in which the yield per invested dollar shall increase. Let us assume that the outlook of today requires in-

* From an address presented before the American Railway Engineering Association at Chicago on March 15.

† President, New York Central Lines.

creased service adaptation; that it invites careful classification of service in order to foster the available business. We lack means, but we must achieve service progress. We sense that passengers want to move over a satisfactory route. They want to be carried in cars better suited than ever to their comfort and safety. They want to spend less time between points of travel. Can these objectives be served only by increased plant investment? Can they be served with existing standards of road? Will the reduced time be accomplished by higher maximum velocities or by removing causes of subnormal operation? What part can effort and classification rather than additional investment play in the rational answers to these questions?

With the decrease in the movement of fuel, ore, steel and other heavy commodities, the residual freight traffic seems to be of a character that requires a more critical service; more adaptation of cars to shippers needs; special equipment to protect individual production. Studies are current to disclose new ratios of dead weight to paying load by the use of lighter metals and efficient design. Freight is moving, in response to demand, at higher speeds aimed to reduce time enroute. The owners of goods in transit have learned to figure on the investment cost of the time in transit as a part of the cost to them of transportation. They will continue to do so.

Rates and Price Levels

Above all other considerations in the public mind with reference to their patronage of railroads is no doubt the relation of transportation charges to the general price level. It seems probable that charges acceptable to them —that invite their patronage, can never quite escape the shadow of the price level. Do not such considerations suggest an operating and maintenance cost that must needs be less per unit of traffic than we now experience? What if the return of volume does not snap back to that which we have had heretofore, but is slowly won by our own effort and adaptation to these broad considerations, which in the end will determine the patronage and support of the railways?

I realize that no such financial achievement can precede a physical achievement. Moreover, no physical achievement of a new art is likely to transpire until taken hold of by men, alert and capable, who can project the physical procedure along lines in which financial salvation may lie. I do not believe in miracles in the sense of any radical change of standards or methods. I do believe that an objective may be as substantial in its reform as the best judgment of men may make it. Such an objective establishes the trend and may be approached without dislocation of order or essentials. I would like, therefore, to leave these suggestions:

1. We must shape our transportation product to our market.
2. We must shape our plant investment and the care of it to our means.
3. We must shape our physical standards to a conformity with such objectives.

It has been my good fortune to have an extensive acquaintance with railroad men in various activities. I have spent my life in association with them. I am confident that the result of reflection and research upon this subject will eventually be of great service to the country.

THE SOUTH AFRICAN RAILWAYS ADMINISTRATION, according to recent reports to the United States Department of Commerce, is constructing two rail motor cars—one, a two-motored car of 300 h.p. and the other a tri-motored vehicle of 420 h.p. Each will have seating capacity for approximately 100 passengers.

Claim Payments Decrease 26.8 Per Cent

LOSS and damage payments made by the Class I carriers of the United States, as reported to the Freight Claim division of the American Railway Association, totaled $18,936,024 in 1932, as compared with $25,868,485 in 1931, a decrease of $6,932,461 or 26.8 per cent. The summary reflects the lowest loss and damage payments since 1904. Decreases are shown in all of the classifications, ranging from 51 per cent in concealed loss to 3 per cent in robbery other than entire package.

	1932	1931	Decrease	Per Cent
Unlocated damage	$6,095,336	$7,085,739	$990,403	14.0
Rough handling	4,979,393	7,648,384	2,668,991	34.9
Concealed damage	1,625,518	2,358,763	733,245	31.1
Defective equipment	970,716	1,502,864	532,148	35.4
Delay	888,137	1,428,010	539,873	37.8
Wreck	727,127	1,001,596	274,469	27.4
Other unlocated loss	637,070	781,406	144,336	18.5
Loss entire package	600,767	919,621	318,854	34.7
Robbery entire package	593,448	678,407	84,959	12.5
Freezing or heater failure	543,135	759,692	216,557	28.5
Error of employee	370,041	510,339	140,298	27.5
Improper refrigeration and ventilation	318,473	376,431	57,958	15.4
Robbery other than entire package	282,798	291,665	8,867	3.0
Improper handling, loading, etc.	160,817	266,214	105,397	39.6
Fire or marine loss or damage	86,209	142,903	56,694	39.7
Concealed loss	57,039	116,451	59,412	51.0
Carload	$14,819,285	$19,956,428	$5,137,143	25.7
Less carload	4,116,739	5,912,057	1,795,318	30.4
Total	$18,936,024	$25,868,485	$6,932,461	26.8

During the year, 1,594,309 claims were received, as compared with 1,979,290 in 1931. The number of claims pending at the end of the year totaled 133,929 in 1932 and 150,322 in 1931. The amount in the suspense account at the end of the year totaled $1,564,570 in 1932 and $2,252,343 in 1931. Of the 1,524,085 claims paid, excluding claims disposed of by several carriers and not reported in the period in which adjusted, 1,180,831, or 77.5 per cent, were settled within 30 days, 226,513 or 14.9 per cent, were settled between 30 and 90 days, and only 116,741, or 7.6 per cent were settled after 90 days.

Railway Express Agency claims paid during the year totaled $1,269,935, which was a reduction of 36.43 per cent, as compared with 1931. The ratio of payments to revenue amounted to 0.92 per cent, as compared with 1.04 per cent in 1931.

For the second consecutive year, loss and damage to fresh fruits, melons and vegetables shows a decrease, which decrease amounted to $1,903,440, or 20.8 per cent. The seriousness of loss and damage to this group of commodities, in relation to the entire claim account is illustrated by comparisons between 1922 and 1932, which show that while payments on all commodities except fruits and vegetables decreased from $22,627,639 to $7,616,140, or 66.3 per cent, payments on fruits and vegetables decreased from $8,453,324 to $7,203,145, or only 14.8 per cent. The number of carloads making up the fruit and vegetable group represents only 3 per cent of all cars handled. In 1922 loss and damage to fruits and vegetables was 27.2 per cent of the carload account, while in 1932 it was 48.6 per cent.

New Transport Policy Planned By President

WASHINGTON, D. C.

SOMETHING in the nature of a "new deal" is impending for both the railroads and the Interstate Commerce Commission. Although plans are not yet fully developed, President Roosevelt in the past few days has been turning his attention to the problems of railroad legislation, while his advisers, headed by Secretary Daniel C. Roper, of the Department of Commerce, have been continuing studies that have been in progress for some time both as to legislation designed to develop a new and definite national transportation policy such as the President has promised and as to a reorganization and concentration of the various governmental transportation regulatory agencies.

Official announcement of the nature of the President's plans, which will indicate how far he proposes to go at this time along the general lines indicated in his Salt Lake City speech last September, is not expected until he sends a special message on the subject to Congress, but after a conference with Congressional leaders on Monday evening a statement was issued from the White House that the topics discussed included, among others, "a program to improve and co-ordinate railroad operations" and "another program relating to the general problem of transportation." A program for improving and co-ordinating the government's activities also is being worked out under authority already conferred on the President by law.

Rail Executives Confer with President

This announcement followed a conference which the President had held earlier in the day with Carl R. Gray, president of the Union Pacific; J. J. Pelley, president of the New York, New Haven & Hartford, and F. E. Williamson, president of the New York Central, accompanied by Prof. A. A. Berle, of Columbia University, who has been one of the President's chief advisers on transportation. These railway executives have been a sort of "contact committee" and have had several previous conferences with the President and his advisers in New York before he came to Washington.

Apparently the President expects the railroads themselves to do something to co-operate with his plans. In his Salt Lake City speech he proposed that the government announce its intention to "stand back of the railroads for a specified period," but that this help be definitely conditioned upon acceptance by the railroads of "such requirements as may in individual cases be found necessary to readjust top-heavy financial structures." He also had a good deal to say about the elimination of competition, the pressing of consolidations to a conclusion, and the elimination of non-paying mileage, as well as the freeing of railroad management from "undue burdens and restraints." It is known that plans for more active progress in the direction of railroad consolidation, which it is generally admitted would require new legislation, have had an important place in the recent discussions and have particularly been the subject of conferences in which Secretary Roper has participated with members of the Interstate Commerce Commission and others.

Railroad legislation is a part of a program of four or five subjects on which President Roosevelt expects action by Congress during the present special session. The original plan when Congress was called into session shortly after the inauguration was that it should pass the emergency banking bill and two or three others and then recess for two or three weeks to allow time for the preparation of a more complete program, but it was later decided better to keep Congress in session until perhaps the middle of May with a view to completing a program before adjournment until January. Complete development of the railroad program is not expected for a week or ten days, while the subjects to be handled by Congress first include the agricultural bill, unemployment relief, and credit relief for farm and home owners. All this represents a rather ambitious program for a short session, and while the President has adopted a plan of leading Congress by placing before it one important measure at a time, accompanied by bills already drafted which they have been asked to pass as emergency measures, sometimes before sufficient printed copies were available, it is not expected that the speed of the first few days can be maintained. Speaker Rainey has already suggested that part of the railroad program may have to go over to another session, and present indications are that any bills which are not included in the President's program would have little chance at the present session.

The announcement that the President was considering transportation started a flood of speculation as to whether his intentions included something drastic in the way of consolidation, co-ordination, "conservation," or just plain regulation, but no authoritative information has been available, and it is understood that various ideas are still under consideration.

The boldness with which the new administration had acted to take charge of the banks, under an old war law, was perhaps the source of the idea in some quarters that the President might have in mind as a surprise some big scheme for placing the railroads under a dictator, or co-ordinator, with a view to squeezing them into half a dozen or so big systems and saving some $600,000,000 or $700,000,000 which some people have estimated could be saved by eliminating competitive duplications and waste. No suggestion was offered as to how the government could be expected to buy any railroads, nor was there any serious proposal that the government close down some railroads for a while so that people would rejoice if they started up again. On the other hand, the Reconstruction Finance Corporation may continue to make loans to roads that comply with the government's wishes and it is understood that some railroad officers believe that a new wave of confidence in railroad transportation might be created by one or two legislative samples of the "new deal", such as repeal of the recapture clause and a beginning of regulation of highway and water transportation. Provision for reorganization of the railroads most in need of it has already been made in the law passed in the closing days of the last session.

Several Features of A. R. A. Program Favored

The legislative program of the Association of Railway Executives, which was outlined before the National Transportation Committee early in December, has of course been made known to the President and he has indicated approval of several of its features. In addition to a program of amendments to the interstate commerce law and new federal and state legislation designed to facilitate consolidations and give the railways an equality of opportunity with other forms of transportation, the association also suggested a shorter emergency program which at that time it was hoped might be considered during the short session. This includes:

(1) Amendment of the Reconstruction Finance Cor-

poration Act to liberalize the requirements as to security for loans.

(2) Amendment of Section 15a, including the rate-making and recapture provisions of the interstate commerce act.

(3) The regulation of commercial vehicles on the highways and of water-borne traffic.

(4) Provision for the retirement of government from the business of transportation on the inland waterways, and permission for the railroads to engage in water transportation on the same terms that are permitted to all other interests.

Chairman Rayburn of the House committee on interstate and foreign commerce has reintroduced the two railroad bills which were favorably reported by his committee after hearings in the last Congress, the bill to revise the rate-making rule of Section 15a of the interstate commerce act, to repeal the recapture clause, and to reduce the requirements of the valuation section, which is now H. R. 3754, and the bill to amend Section 5 as to acquisitions by holding companies, which is now H. R. 3755. He also reintroduced as H. R. 3756 the bill he had introduced before to provide for regulation of bus transportation and to some extent of truck transportation, which had not been acted upon by the committee, although in a previous Congress the House had passed a somewhat similar bus bill. He also introduced as H. R. 3760 a bill to establish the Federal Communications and Power Commissions, which would take over such jurisdiction as the Interstate Commerce Commission now has as to telephone and telegraph companies. The House committee held its first meeting for the session on Tuesday and considered the 15a and holding company bills, which the members were asked to study with a view to reporting them out at the next meeting. Some consideration also was given to the motor transport bill.

Chairman Dill of the Senate committee on interstate commerce has also discussed railroad bills briefly with the President. Senator Dill has been quoted in the press as advocating abolition of the Interstate Commerce Commission and substitution of a director of transportation but later stated that his remarks had been misinterpreted.

Consolidation of Regulatory Agencies

Plans for concentrating under a single direction the regulatory functions of the federal government as applied to various forms of transportation are being worked out under the new powers conferred on the President by an amendment to the Treasury-Postoffice appropriation bill under which he is authorized "to reduce the number of such agencies by consolidating those having similar functions under a single head, and by abolishing such agencies and/or the functions thereof as may not be necessary for the efficient conduct of the government," and also to "segregate regulatory agencies and functions from those of an administrative and executive character." It is believed that numerous revisions of existing regulatory statutes under which these various agencies now function would be necessary to co-ordinate them into an efficient organization, but it is understood that it is proposed to go as far as possible in the way of reorganization under these broad new powers and that the character of the legislative revision that would be considered later would depend considerably on the extent to which it may be proposed to simplify regulatory processes. While it is understood that the plan contemplates definitely a combination of various regulatory agencies into one organization, several important questions were still to be decided, for example the question whether it would be made a bureau of the Department of Commerce, whether it would report to the President in some other way, or whether it would be independent. Secretary Roper is head of a committee selected by Mr. Roosevelt before the inauguration to study plans for governmental reorganization but there has been some question as to whether such a powerful organization as is proposed would not be too big to be made a mere bureau of a department, and objections have been made in many quarters to the idea of destroying the independence of the I. C. C. by treating it as an executive agency.

Meanwhile no effort has yet been made to bring up in the new Congress the independent offices appropriation bill, which carries the appropriations for the Interstate Commerce Commission, the Shipping Board, and other independent offices. This bill was passed by both the House and the Senate at the last session but was not signed by President Hoover. The President has appointed three commissioners of the Shipping Board, which was left without a head on March 4 because the Senate had not confirmed President Hoover's appointments, but it is reported that these appointments are intended as temporary and that perhaps two will resign if the reorganization plan is adopted.

Prince Rail Consolidation Plan

F. H. Prince, Boston banker and railway financier, who has been working for some time on a comprehensive plan for railroad reorganization and consolidation or co-ordination, submitted an outline to the President last week and later participated in a conference on it with Secretary Roper, Commissioners Eastman, Mahaffie, and Porter of the Interstate Commerce Commission, and others. Mr. Prince's consolidation plan, it is understood, is being prepared under the supervision of John W. Barriger, railroad analyst for the New York investment firm of Calvin Bullock, assisted by a large staff of experienced railroad men. The plan involves the elimination of competition except between major points. Rumors to the effect that consolidation on a strictly regional basis was the goal are unfounded since it would appear that the territory proper to each system would be served at principal points also by strong lines from adjacent systems. Roughly speaking, the report is that the first system would be organized around the New York Central and would include the Van Sweringen properties and the northern New England lines. The second system would include the New Haven, the Pennsylvania, and the Baltimore & Ohio. The third system would include most of the lines in the southeast except the Southern, which, with the Illinois Central, would form the nucleus of a fourth system. The northwestern lines, except the Chicago & North Western, would make up the fifth system. The sixth would be grouped around the Union Pacific and the Southern Pacific and would include the Rock Island and the Northwestern, while the seventh would be built up around the Santa Fe and the Missouri Pacific.

Detailed studies of the movement of various classes of traffic by present routes, it is understood, have been made with comparisons as to probable routes and service under co-ordination, with savings which are in many cases, if reports are true, little short of amazing. In fact, the belief is confidently held in some quarters that those making this study have reached a total figure of possible economies on a basis of 1932 traffic of something like 700 million dollars which they hope to be able to itemize in detail to answer any possible questions.

Railroad Case Gets to the People

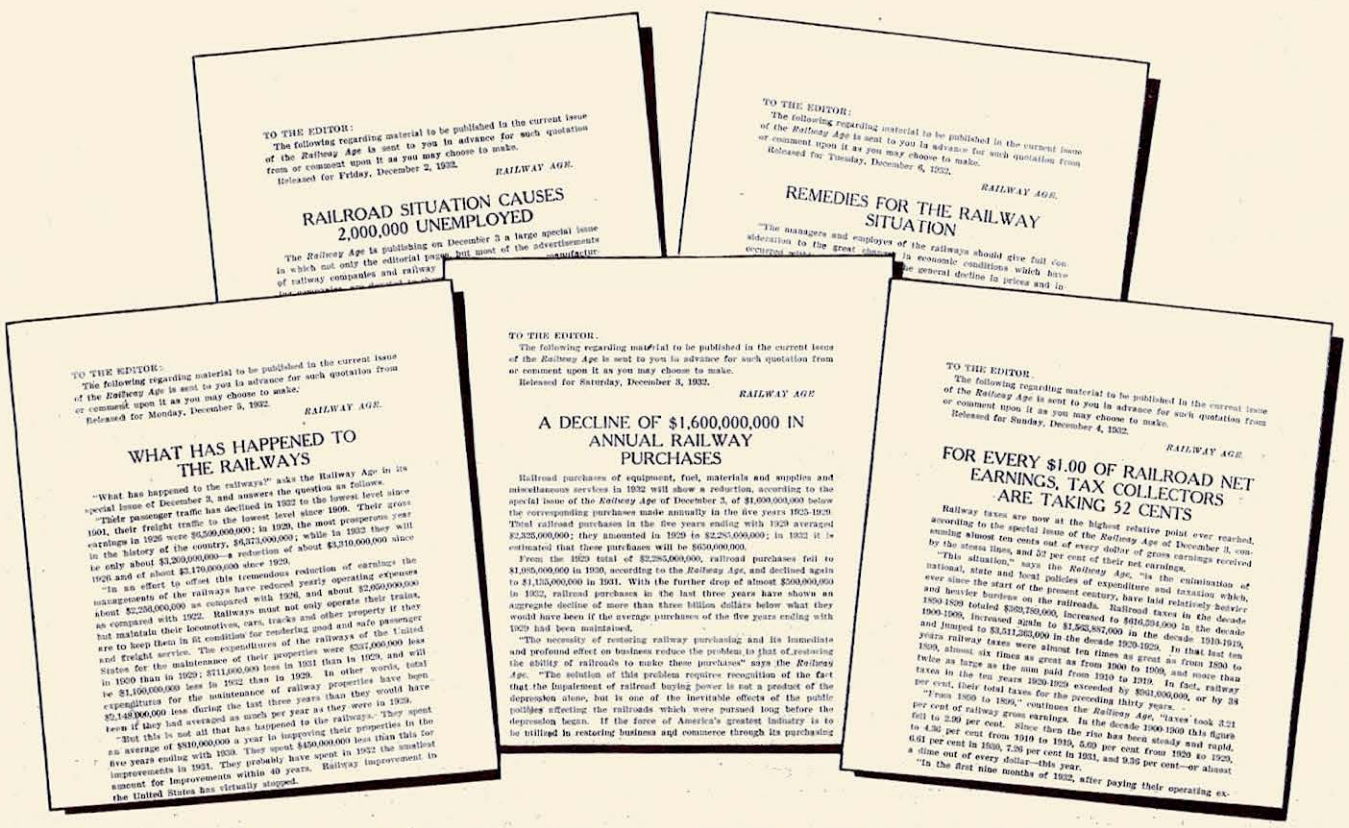
Newspapers all over the country, with aggregate circulation of 11,549,937, have published stories and editorials based on December 3 issue

THE statement of the condition of the railway industry and the proposals for its improvement, which were presented in an extraordinary fashion in the December 3, 1932, issue of the *Railway Age,* are still finding their way into the hands of the public. Although nearly four months have elapsed since the issue was published, newspapers in many parts of the United States are still quoting it. Up to January 16, extracts from the December 3 issue had been published in newspapers with an aggregate circulation of 3,679,406. Today, the total newspaper circulation of the railway industry's message stands at 11,549,937. It is evident that the issue is accomplishing its purpose in getting the case of the railroads not only before the regular subscribers to the *Railway Age* and the thousands of legislative and executive officers of the national and state governments to whom copies were sent, but directly into the hands of people of the United States.

Press Releases Widely Used

The wide circulation which the contents of the December 3 issue of the *Railway Age* have received has not been accidental. The circulation was stimulated by the nation-wide distribution of quotations from articles in the issue, in the form of news releases. These stories were sent to a long list of newspapers throughout the country, and they have been widely used. There were five of them, released for publication on successive days beginning on December 2. The first one, dealing with the effect of the railroad situation upon unemployment, with the caption "Railroad Situation Causes 2,000,000 Unemployed," has been published by 193 newspapers in 17 states, the combined circulation of the newspapers totaling 515,211. The second story, entitled "A Decline of $1,600,000,000 in Railway Purchases," has been printed in 133 newspapers in 21 states, the newspapers having a total circulation of 1,803,792. The third story, entitled "For Every Dollar of Railroad Net Earnings, Tax Collectors Are Taking 52 Cents," has found a place in 138 newspapers with an aggregate circulation of 1,304,445. These newspapers are published in 36 states. The fourth story on "What Has Happened to the Railways?" has been reproduced by 264 newspapers in 26 states. The total circulation of these newspapers amounts to 1,094,283. The last *Railway Age* news release, entitled "Remedies for the Railway Situation," has been published by 111 newspapers in 11 states, the newspapers having an aggregate circulation of 370,031.

In addition to the publication of the news releases in the form in which they were sent out by the *Railway Age,* there has been unusually widespread publication of two editorials on the railway situation, which were prepared by news syndicates on the basis of material published in the December 3 issue. One of these consists



TO THE EDITOR:
The following regarding material to be published in the current issue of the *Railway Age* is sent to you in advance for such quotation from or comment upon it as you may choose to make.
Released for Friday, December 2, 1932.
RAILWAY AGE.

RAILROAD SITUATION CAUSES 2,000,000 UNEMPLOYED

TO THE EDITOR:
The following regarding material to be published in the current issue of the *Railway Age* is sent to you in advance for such quotation from or comment upon it as you may choose to make.
Released for Tuesday, December 6, 1932.
RAILWAY AGE.

REMEDIES FOR THE RAILWAY SITUATION

TO THE EDITOR:
The following regarding material to be published in the current issue of the *Railway Age* is sent to you in advance for such quotation from or comment upon it as you may choose to make.
Released for Monday, December 5, 1932.
RAILWAY AGE.

WHAT HAS HAPPENED TO THE RAILWAYS

TO THE EDITOR:
The following regarding material to be published in the current issue of the *Railway Age* is sent to you in advance for such quotation from or comment upon it as you may choose to make.
Released for Saturday, December 3, 1932.
RAILWAY AGE

A DECLINE OF $1,600,000,000 IN ANNUAL RAILWAY PURCHASES

TO THE EDITOR:
The following regarding material to be published in the current issue of the *Railway Age* is sent to you in advance for such quotation from or comment upon it as you may choose to make.
Released for Sunday, December 4, 1932.
RAILWAY AGE

FOR EVERY $1.00 OF RAILROAD NET EARNINGS, TAX COLLECTORS ARE TAKING 52 CENTS

Railway Age News Releases which Helped to Carry the Message of the December 3 Issue through the Newspapers to the Public

of editorial comments on the article in the December 3 issue entitled "Railway Purchases—A Vital Force in Business Recovery." This editorial has been used by 277 newspapers in 41 states, the aggregate circulation of the newspapers being 1,101,497. The editorial reads as follows:

Without Railroad Prosperity—What?

An editorial in the *Railway Age* on "Railway Purchases—A Vital Force in Business Recovery," brings out vividly the influence of the transport problem on the lives of all workers, all farmers, all producers.

In the five years previous to 1930, railway purchases averaged over $2,000,000,000 a year. In the past three years, reductions in these purchases have amounted to almost $3,000,000,000.

This decline is greater than all the loans and appropriations made by the federal government for public works and relief. It has brought distress to a multitude of communities, has affected every state in the Union and has thrown hundreds of thousands of workers, in a large number of industries, out of employment.

The iron and steel industries, the lumber and copper industries, the oil and coal and electric supply business, in the past, have counted on the railroads for a heavy percentage of their sales.

Restoration of railway purchasing power is indispensable to business recovery. No one can doubt that stimulated rail activity would be one of the greatest blows that we could strike against unemployment, against low, general purchasing power, against the depression.

Still greater circulation has been given to the other newspaper editorial based upon the December 3 issue. This one has been published by 350 newspapers in 43 states. Most of the newspapers which have used the editorial are small, with circulations ranging from a few hundred to several thousand. But the editorial also has earned space in metropolitan newspapers. It has been published in no less than 11 large newspapers, each with a circulation of more than 100,000. The total circulation of all newspapers which have published the editorial is 5,360,678. This editorial is as follows:

Remove Railroad Handicaps

The *Railway Age* has published a remarkable special edition. For the first time, in magazine form, all editorial content and most of the advertising is devoted to presenting the facts concerning an economic problem of the first importance.

The facts and figures in this edition show vividly that a fair deal for the railroads is essential to the public welfare. But what is a fair deal? It is simple enough. Broadly, it entails the following action, says *Railway Age:*

The legalization of a transport policy that will regulate EVERY common carrier according to the same principle.

The elimination of government subsidies for ANY carrier.

Equitable taxation of every carrier.

No special favors for any carrier.

If we continue to allow commercial motor transport to ply the tax-built highways, unregulated or half-regulated; if we continue to put up millions of dollars for the operation of waterways; if we donate other millions to subsidize competitive air mail and steamship lines, the railroads are headed for ruin and nothing will stop it. When that happens, a real business cataclysm will have arrived. Every worker, every investor, every executive, every home owner, every farmer, even every political job-holder will feel the result. The railroads are the greatest single industry we have—and their failure, forced by legalized handicaps, would mean disaster.

Buffet Lunch Counters, where food and drinks are served at prices lower than those prevailing in connection with the regular dining services, have been placed in operation on the Austrian Railways, according to a recent report received by the U. S. Department of Commerce. The buffet meals are served in a section of the dining car set apart for the purpose, the regular dining service being maintained in the remaining half of the car. The experiment, designed to offset losses entailed in the operation of dining services, will, if successful, be extended so that many trains, which now carry no dining cars, will be equipped with a buffet lunch counter.

L. C. L. and Contract Buying by Railroads

If the terms under which different railroads made their purchases last year is any criterion of present-day railroad buying procedure, it would appear that railway purchasing has been undergoing changes in methods and policies, as well as in volume and prices, although not to so great an extent. There is now proportionately less buying in car-load quantities and less purchasing under time-honored contracts, while factory prices are less prevalent as a basis for quotations.

This is shown by a comparison of the conditions under which 10 representative roads purchased various materials in 1932 and 1928. Excluding items of coal, ties and lumber, investigation shows that out of a total of

Table I—Purchases of Miscellaneous Materials, 1928 and 1932

		Number Buying on Car-Load Basis		Number Buying F.O.B. Shipping Point		Number Using Term Contracts	
Road	Items	1928	1932	1928	1932	1928	1932
A	55	26	23	16	9	39	33
B	52	36	32	15	1	32	35
C	55	27	31	21	11	29	29
D	56	29	25	25	29	32	28
E	52	21	21	10	8	33	30
F	50	29	28	7	9	31	30
G	49	24	22	21	10	17	5
H	46	27	24	30	12	20	8
I	56	16	9	38	20	35	48
J	43	25	23	8	0	2	8
K	512	260	238	191	109	270	254

512 records covering the purchase of from 43 to 56 representative materials by each road, the purchasing was performed on a car-load basis in 238 cases by the 10 roads in 1932, as compared with 260 in 1928; and by term contracts in 254 cases, as compared with 270 in 1928, while the business was handled at mill or factory prices, as distinguished from prices to line of road or destination, in 109 cases, as compared with 191 cases in 1928.

Much Variation in Practice

The statistics show a wide variation in practices on different roads, dependent upon individual preferences as well as the size and location of the properties. One road purchased only 9 of 56 items on a car-load basis in 1932, as compared with 16 items purchased on that basis in 1928. Car-load buying on other roads extended from 23 to 32 of the items, which is contrasted with a range of car-load buying of from 25 to 35 of the items by the same roads in 1928. One of the 10 roads eliminated the use of contracts for its miscellaneous purchasing before 1929 and two others have since shown a tendency to do likewise. Many roads, however, appear to be continuing the use of contracts in more than half of their miscellaneous buying and, in some cases, to have increased their use. The greatest variation in practice is shown in the use of mill and factory prices as a basis of buying. The prices paid by one of the 10 roads for the materials in question were all on some other basis in 1932, while the mill or factory price was the basis of payment in 20 of the 56 cases on another road in 1932, as compared with 28 in 1928.

The extent to which car-load quantities, contracts and mill or shipping-point prices entered into the purchase of different commodities of a miscellaneous nature in 1932, and the extent to which contracts entered into the purchase of different commodities in 1932, as compared with 1928, are shown in the second table. It will be seen that car-load buying entered largely into the pur-

chase of oils, track fastenings, couplers, wheels and ties, with contracts predominating in the purchasing of structural steel, boiler tubes, castings and journal bearings, while shipping-point prices predominated in the purchase of track and locomotive materials.

With coal, ties and lumber, the car-load is still the universal shipping unit. Shipping-point prices also predominate where off-line purchases are involved, although to a lesser degree in the case of lumber. Contracts are rare in purchasing lumber, principally because of the infrequency with which this commodity is obtained. In the purchase of coal, contracts with producers appear to be giving way to allotment plans.

Table II—Analysis of Representative Purchases in 1932

	Roads	Number Using Term Contracts 1928	Number Using Term Contracts 1932	Number of Roads	Number Buying on Car-Load Basis	Number Buying F.O.B. Mill Year 1932	Number Buying Term Contracts
Tie plates	10	3	1	12	12	4	3
Track bolts	10	3	2	15	11	4	3
Track chisels	11	4	3	11	0	5	6
Track spikes	11	3	4	15	14	2	5
Track shovels	11	5	5	12	0	4	5
Bond wire	11	0	0	10	1	6	1
Woven fence	9	6	5	12	6	4	8
Angles, structural	11	7	6	13	8	4	9
Fabricated steel	9	1	0	10	9	2	0
Cast-iron pipe	7	0	0	7	4	4	0
Culvert pipe	11	0	0	13	2	4	1
Boiler tubes	11	7	7	15	8	3	10
Tool steel	11	7	6	15	0	8	9
Sheet steel	9	5	4	14	3	1	7
Pig iron	5	1	1	4	3	1	1
Brake shoes, loco.	11	9	7	15	7	2	11
Brake shoes, frt.	10	8	7	14	8	2	11
Grey iron castings	7	7	7	12	1	0	9
Mall. iron castings	11	8	9	15	3	3	13
Steel castings	10	9	9	15	2	0	13
Couplers	11	9	9	15	11	1	11
Locomotive tires	11	10	9	15	12	1	13
Nails	11	8	8	15	8	1	11
Machine bolts	11	4	5	15	1	0	9
Bar steel	10	6	7	13	9	4	7
Boiler steel	11	7	6	15	9	7	9
Spring steel	11	9	6	15	4	5	7
Loco. axles	11	7	6	15	6	5	9
Car axles	11	7	6	14	8	4	8
Steel pipe	11	5	6	15	7	1	6
Pig lead	11	0	0	13	0	0	1
Sheet copper	10	0	2	14	0	2	1
Journal bearings	7	6	7	12	2	0	11
Copper wire	8	0	0	9	1	4	0
Weather-proof wire	10	1	1	6	0	0	1
Fire brick	10	2	2	13	8	5	3
Leather belting	11	6	4	15	0	1	7
Manila rope	10	2	4	15	0	0	5
Wire rope	11	6	6	15	0	1	11
Rubber packing	9	1	2	13	0	2	2
Fuel oil	11	5	4	15	15	2	6
Gasoline	11	4	6	13	13	1	4
Oil, long-time burn	11	7	3	15	10	3	5
Car oil	8	7	6	14	13	3	7
Grease	9	6	7	14	8	2	9
Waste	10	4	3	15	8	2	5
Creosote	9	4	2	13	13	1	4
Glass	11	4	6	14	0	0	2
Linseed oil	10	1	1	15	1	0	7
White lead	11	4	5	15	0	0	6
Air hose	11	5	6	15	1	0	8
Boiler lagging	11	6	7	15	5	7	12
Cement	12	2	4	13	12	0	5
Oxygen	11	9	10	15	0	1	13
Soda ash	11	6	6	14	12	8	9
Lime	10	3	3	13	11	3	5
Copper tubing	8	1	0				
		267	258	749	310	140	364

The reduction in the proportionate amount of buying done on a car-load basis is significant, in view of the fact that railroads, regardless of their size and distance from sources of supply, have generally been partial to purchasing, so far as possible, on a car-load basis, for the purpose of securing lower prices and reducing the shipping and other costs of handling. By various adjustments in ordering and distribution, and by consolidations of divisions, they succeeded in maintaining, if not increasing, the volume of their car-load buying throughout the several years prior to 1929 when "hand-to-mouth buying," so called, was supposed to dominate the commercial trade. From strictly purchasing considerations, the roads have also generally shown a preference in the past for the practice of purchasing under term agreements, which predetermine the supplier and thus afford the means of economizing in the time and labor of purchasing, if not also as a means of securing better prices.

Whatever the cause, the effect of departures from contract and car-load buying upon those elements in the cost of materials not included in the purchase price grow larger as the volume of purchases becomes smaller. Hundreds of items of railway material are now being purchased in quantities so small that the measurable costs of handling compare with, and sometimes exceed, the initial prices paid. One of the principal problems receiving the attention of railway supply organizations is thus one of meeting the changing conditions without impairing the ultimate cost and efficiency of the supply service.

Freight Car Loading

WASHINGTON, D. C.

THE effect of the national bank holiday was shown in the figures for freight car loading in the week ended March 11. The total for the week was 437,813 cars, a reduction of 40,014 cars as compared with the week before and of 137,668 cars as compared with the corresponding week of last year. Decreases as compared with the preceding week were reported as to all commodity classifications, including 20,839 cars in miscellaneous freight, 9,734 cars in grain and grain products, and 7,629 cars in l.c.l. merchandise. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading

Week ended Saturday, March 11, 1933

Districts	1933	1932	1931
Eastern	104,928	134,274	166,868
Allegheny	85,515	112,253	148,118
Pocahontas	30,816	41,328	45,261
Southern	70,588	91,962	120,791
Northwestern	47,117	64,612	85,700
Central Western	61,295	84,767	105,360
Southwestern	37,554	46,285	61,482
Total Western Districts	145,966	195,664	252,542
Total All Roads	437,813	575,481	733,580
Commodities			
Grain and Grain Products	18,127	27,195	36,239
Live Stock	10,801	16,798	20,018
Coal	95,321	141,452	140,491
Coke	4,672	7,216	8,598
Forest Products	13,262	18,967	34,793
Ore	1,790	2,245	5,875
Mdse. L. C. L.	154,423	185,122	220,329
Miscellaneous	139,417	176,486	267,237
March 11	437,813	575,481	733,580
March 4	477,827	559,479	723,215
February 25	459,079	535,498	681,221
February 18	514,390	572,265	713,156
February 11	501,320	561,535	720,689
Cumulative total, 10 weeks	4,784,117	5,644,952	7,164,125

Car Loading in Canada

Car loadings in Canada for the week ended March 11 showed a slight increase over the previous week, viz., from 34,211 cars to 34,371 cars, and the index number rose from 57.46 to 58.40. Coal increased by 525 cars and merchandise by 328 cars, but grain decreased by 610 cars and other commodities showed small changes.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
March 11, 1933	34,371	15,769
March 4, 1933	34,211	18,049
February 25, 1933	33,939	17,668
March 12, 1932	41,763	21,315
Cumulative Totals for Canada:		
March 11, 1933	324,797	171,238
March 12, 1932	412,121	210,946
March 7, 1931	460,542	273,926

Canada's Railway Bill Passes Second Reading

ENDING a debate of two weeks' duration the House of Commons at Ottawa late last week gave second reading to the bill which gives effect to the recommendations of the Duff commission on railway problems. An interested spectator of the voting was President E. W. Beatty, of the Canadian Pacific, and, as a darker side to the picture, it happened to be the day of the funeral in a Pennsylvania town of Sir Henry Thornton, former president of the Canadian National. The vote was 120 for and 65 against.

While no Conservatives voted against the measure, in spite of the fact that some of them spoke critically of it during the debate and in the face of the challenge previously in the same day from Hon. Ian Mackenzie (Vancouver), former Liberal Cabinet Minister, that if the party whips were called off many sitting behind the Ministry would vote against the legislation, nine Liberals voted with the Government for the bill, also five Progressive and Labor members. Fifty-six Liberals and nine Progressive and Labor members opposed the bill.

Included amongst the Liberals supporting the measure were: Hon. William D. Euler, former Cabinet Minister and about the only out-and-out public ownership advocate in Parliament; Major C. G. Power, a prominent Quebec City member; S. W. Jacobs, noted Montreal lawyer; and Henri Bourassa, who held the spotlight in Quebec province for years as so-called Nationalist leader. An amusing feature in connection with this list of Liberals who voted for the bill is the fact that while Mr. Euler declared he would support the legislation because it would be a formidable bar to amalgamation of the Canadian National with the Canadian Pacific, Sam Jacobs of Montreal said he would vote for the bill because it paved the way for that amalgamation. A wide variety of views were expressed during the course of the debate.

Amalgamation the Central Topic

Amalgamation of the two roads proved to be the central subject for discussion when the bill was moved for second reading in the House. The fight started when the Liberal leader, Rt. Hon. W. L. Mackenzie King, declared that in the absence of a definite declaration from the Government he would be warranted in voting against second reading for he feared there was "sinister design" concealed in the legislation, a camouflaged move on the part of the Government in the direction of amalgamation. Both Premier R. B. Bennett and Hon. Robert J. Manion, Minister of Railways and Canals, indignantly denied this charge. To make it doubly certain that the bill would not pave the way to amalgamation Premier Bennett promised the House that when the bill reached committee of the whole he would have reinserted a clause, which was in the measure originally but deleted in the Senate because deemed needless, providing definitely against any linking up of the two roads. The House is dealing with the measure in committee stage this week.

Another repeated Liberal criticism was that too wide powers were to be conferred upon the proposed board of trustees of the Canadian National to take the place of the present board of directors. They declared that with the powers to be given them the trustees could do anything they pleased with the Canadian National and without reference either to Parliament or to the Government. Some of them, too, resented Premier Bennett's explanation of why trustees must replace the former directors. They disliked his likening the proposed change to a receivership and his statement that the road did not belong to the people but to the security holders, to those who loaned the money. Liberals refused to see any distinction between the taxpayer and the shareholder, and some of them declared that talk of a receivership was bad advertising both for the railway and for the country.

Dr. Manion Replies to Criticisms

Dr. Manion, Minister of Railways, who opened the debate nearly two weeks ago with his motion for second reading of the bill, closed the debate late last week by briefly replying to the various criticisms and attacks. He had hoped that the debate would take on a non-political aspect but he had been disappointed and because there had been partisan attacks from the Liberal side he felt warranted in replying in a partisan way. One result of this was that in an effort to show that there had been political interference with the management of the Canadian National during the Liberal regime he recited an incident in connection with the late Sir Henry Thornton that was little short of a sensation in the House.

"I should like to point out an extraordinary thing," said Dr. Manion, "which has never been referred to publicly before. During 1929 when this country was being committed to expenditures totaling over $200,000,000 on behalf of the Canadian National, Sir Henry Thornton was not technically an employee of the company. Sir Henry Thornton's contract had run out on October 3, 1928, and it was not renewed until September 23, 1929. I am simply pointing out that during that particular time when this country was committed for these tremendous expenditures, Sir Henry Thornton was not technically an employee of the company. His contract had run out and it was necessary that it be renewed. Sometimes I find myself asking this question: Was that used as a club over Sir Henry Thornton? My right hon. friend the leader of the opposition shakes his head rather emphatically, but he did not hesitate to impute sinister motives to us."

"The minister is the only one who would think of that sort of thing," was Mr. Mackenzie King's rejoinder.

The minister also denied Liberal claims that the various component parts of the present National system were in a poor condition when the Liberal Government took them over in 1922, and he quoted from a statement of the late Sir Henry Thornton in which the latter testified to the satisfactory condition of many of the lines.

To illustrate the vigor with which some Liberals attacked the bill some concluding sentences of the speech of Hon. Ian Mackenzie (Vancouver) will suffice:

"The Prime Minister told us that part II meant co-operation by agreement and that part III meant co-operation by direction. I say part II of this bill means co-operation by direction and part III means co-operation by compulsion. I am opposed to them. It is taking away privileges from the Canadian people; it is destroying public ownership and public control of your railway system in the Dominion of Canada. For those reasons I am opposed to this legislation. I believe it destroys the fundamental rights and the constitutional authority of Canada. It destroys the essential privileges of the House of Commons. This House of Commons is asked to throw away its rights, to take a leap in the dark, to throw away its own voluntary and free will, to throw away the rights of our forefathers who fought for hundreds of years for the constitutional development of our country."

Aishton and Gormley Head A. R. A.

Fletcher to head railways' legal activities at capital, Thom continuing his association with the work

AT a meeting of the directors of the American Railway Association at Chicago on March 22, R. H. Aishton, president of the association, was elected to the newly-created position of chairman of the board of directors, and M. J. Gormley, executive vice-president, was elected to the presidency of the association, succeeding Mr. Aishton. The appointments become effective April 1. Alfred P. Thom, general counsel of the Association of Railway Executives, is to become associate general counsel of the association and will be succeeded as general counsel by R. V. Fletcher, general counsel of the Illinois Central and chairman of the legislative committee of the Association of Railway Executives. W. C. Kendall, manager of the railroad relations section of the Car Service division, A. R. A., will succeed Mr. Gormley as chairman of that division, a post the latter has held in addition to the executive vice-presidency of the association.

R. H. Aishton

The increasing importance of the national aspect of the railroad problem, the constant and growing demands by the government, regulatory and legislative authorities and public bodies upon the time of spokesmen representative of all the railways—this, combined with the stress laid upon the inter-railroad co-operative activities carried on through the American Railway Association, made it imperative that the burden of the executive duties be shared. The growing pressure of the legislative and legal work of the railways acting co-operatively, which devolves so heavily upon the Washington office of the Association of Railway Executives, necessitated a division of the responsibilities of the association's principal legal office which resulted in the call to Judge Fletcher.

In electing Mr. Aishton to the chairmanship and Mr. Gormley to the presidency, the directors are continuing the association in the activities of the A. R. A. which has extended over many years and which began prior to that, when Mr. Aishton was president of the Chicago & North Western.

Richard Henry Aishton was born at Evanston, Ill., on June 2, 1860. He was educated in the public schools of Evanston, Ill., and entered railway service in 1878 as axman in the engineering corps of the Chicago & North Western. He subsequently served with the same road as rodman, levelman, assistant engineer, superintendent of bridges and buildings and division engineer. In 1895 Mr. Aishton was appointed assistant superintendent and two years later he became division superintendent. He was advanced to the position of general superintendent in 1899 and in 1902 he was promoted to assistant general manager, being further advanced to the position of general manager in 1906. In 1910 he was appointed vice-president in charge of operation and maintenance, serving in that capacity until 1916, when he became president of the road. From 1918 to 1920 Mr. Aishton was regional director of the Northwestern Region for the United States Railroad Administration and in 1920 he was elected to the presidency of the American Rail-

(*Continued on page 456*)

Gormley

A. P. Thom

R. V. Fletcher

Motor Transport Section

Store-Door Service—
Can the Railroads Afford It?*

By J. R. Turney
Vice-President, Law and Traffic, St. Louis Southwestern

THE demand of modern business that railroads accept and deliver freight at the doors of their patrons means nothing more than that we are expected to complete the job. The same service has been demanded and given by practically all commercial enterprises. A dispassionate examination will reveal that this demand is not an unreasonable one—that the demand for us to extend our service between the doors of our patrons, instead of between our depots, springs more from the service needs of industry than it does from the competition of other transport agencies which have already met that demand.

The essentials of modern transport, which will adequately meet the needs of our civilization, in the order of their importance, are: Reliability, speed, economy, equability and adaptability. A casual survey shows that door service will contribute in no small degree to each of these indispensable attributes.

Above everything else, industry demands that its transport service be reliable. Freight must be handled with sureness and safety, schedules must be definite, promises kept and performance sure. In the absence of door service, three independent carrier agencies—two draymen and the railways—are interposed between the consignor and the consignee. Not only are the draymen seldom known to both patrons, but their service of necessity is not co-ordinated with that of the railroad, and schedules—if they may be called that—are indefinite and uncertain, and in many cases their responsibility is doubtful. Industry's demand that the entire movement be integrated and that the reliability and the responsibility of the railroad for the movement begin and end where the shipment begins and ends—that is, at the store door—was inevitable in the march of progress.

Speed a Fundamental Requirement

Today, speed is the essence of every contract of carriage. The only thing which is harder to find than a carload of freight is a car which can be moved in a drag-freight train. Since industry has learned that we utilize less than a fifth of the train's potential over-all speed of 500 miles per day, it is curious to learn why we speed cars over the rails at 30 miles per hour for 5 or 6 hr. and then dawdle with them around terminals for the remainder of the 24 hr. It wonders why we run the wheels off to arrive on the first or second morning and then waste as much time in notifying the consignee that the freight has arrived as was required for the entire movement. Industry is not to be satisfied indefinitely with the time-worn alibi that these terminal delays are unavoidable. It will discover that they are unavoidable only so long as we cling to switch engines and cars, limited as these are to a single route and compelled to operate through congested yards and industrial areas and across and oftentimes along densely traveled streets, and of necessity upon sporadic schedules. Our patrons are beginning to wonder if it is really necessary that it should require as much time to get a car into a train at a large terminal as it does to move the train 500 or 600 miles.

Much of this terminal delay can be avoided by door service, which synchronizes terminal and line haul movements, eliminates the warehousing of merchandise and the storage of cars on hold tracks pending notification of the freight's arrival, and delivers the merchandise when it arrives direct to the dray and thence to the consignee's door without red tape or delay. Furthermore, it permits the freight, when the car arrives at the outer yard, to be immediately transferred to drays and to be on the way to the consignee's dock within the time required to classify the train and prepare the freight bill.

Railroad Future Depends on Adaptability

The one thing which made possible this industrial empire of ours, and incidentally brought about the bygone dominance of the railroads, was cheap transportation. Cheap transportation is just as indispensable to the continuance of that empire as it was to its establishment. We sometimes overlook the cartage and packing elements in the cost of transportation, which in many cases approximate the freight charges. The inflexibility of our present packing requirements — requirements which have become so onerous to our patrons—must be relaxed if we are to remain in the merchandise business. That relaxation becomes possible with the continuity of control and possession of freight which door service implies and requires. Cartage costs for handling their merchandise, which our patrons pay, are much higher than the amount which it would cost the carrier to furnish the service. By using our own drays, we can reduce the cost now paid by shippers for the cartage of carload freight by as much as 50 per cent. These are not the only savings which would follow directly from the installation of door service. The carrier will be able to reduce its station expense, because door service eliminates warehousing and reduces platform hand[l]ing of merchandise and switching of carload traffic.

Commerce must be afforded channels in w[hich] flow smoothly, continuously and witho[ut] To continue as the chief transportatio[n] commerce, the railroad must integrate

* From an address delivered before the Traffic Study Club of Akron, Ohio, on January 9.

service with the operative demands of industry. That day is gone when we could require industry to accommodate its operation to the convenience of the railroad's operation. The extent to which the railroad can adapt itself to the needs and convenience of the patron will in a large measure determine the ultimate part which it will hereafter play in the transportation field. The railroad has successively removed many former obstructions to free and easy commercial intercourse and has assumed greater and greater responsibility for the integrity of the movement. Having gone as far as we have in promoting the fluidity of transport, which is so important to commerce and industry; having relieved the shipper of all care or worry after he has brought the freight to our depot until it reaches the depot at final destination, it is difficult to understand an unwillingness to remove this last barrier and assume responsibility for the entire movement from door to door. It does not seem at all likely that we can long decline to meet industry's demand that this obstruction to free movement and commerce be also struck down.

The final prerequisite of a good transport service is equability. For trade to remain free under the competitive system, it is imperative that all patrons be treated alike, and that preference be shown to none. For many years, by means of industrial tracks, railroads have given carload door service to patrons whose industries were located on such tracks. The additional cost of rendering this door service by these industrial tracks is a substantial one, although the patron who receives it pays no higher rate than does the off-track patron who does not. This apparent discrimination was legally excused so long as it was impossible for the railroads to afford a like service to other shippers because of the difference in track facilities. The advantages which on-track shippers have enjoyed have been an important factor in causing urban congestion, as well as greater and greater investment by carriers in providing areas for industrial development. Now that the motor vehicle enables us to extend an equivalent service for the same or indeed a lesser cost, thereby relieving both the discrimination and the congestion, it will become increasingly difficult for us to withstand the pressure to remove this disparity in service.

We must recognize the fact that the receipt and delivery of goods at the doors of our patrons is an indispensable part of the transportation, and is, therefore, a part of the job which we hold ourselves out to do; that the economic need of industry for reliability, speed, economy, fluidity and equability in transport, rather than the competition of other forms of transport, is the basic cause of this unremitting pressure to install door service.

Co-ordination on the Cotton Belt

So much for the theory of door service; now for its practice. The Cotton Belt is rather proud of the fact that it was a pioneer among American railroads to provide store-door service, not only on l.c.l. traffic but more recently with carload traffic. In the latter part of 1928, it organized a motor truck subsidiary—the Southwestern Transportation Company. This company acquired the local intrastate franchises to operate as a common carrier by truck on all highways paralleling our railroad in Missouri, Arkansas, Louisiana and Texas. From comparatively small beginnings, it has grown until it now plays a very important part in our operations, and is one of the largest, if not the largest, common carrier truck operator in the southwest. From the outset, this transportation company gave store-door pick-up and delivery on merchandise freight without additional charge.

For some time after it was organized, this subsidiary functioned solely as a truck line, wholly independent of the railroad. We soon found, however, that by co-ordinating the train and truck facilities, we could render a faster, a better and a cheaper service than could be rendered by either instrumentality acting alone. This co-ordination has proceeded to the point where at present the railroad facility is used only to handle freight in car lots and the truck is used solely to distribute all parcel freight, including the railroad merchandise from the break-bulk points to which it is handled in consolidated merchandise cars by the railroad.

About a year after the Southwestern Transportation Company began its operations, other railroads in the southwest organized subsidiary transport companies to handle merchandise intrastate in Texas and Louisiana, at rail rates, and with free door service. These transport companies differed from our Southwestern company in that they were in no sense trucking companies, owned no trucks, but were operated analogously to freight forwarders upon a contract rather than a rate basis. All of these so-called transport companies were confined to intrastate operation, except the Southwestern Transportation Company, which also operated in interstate commerce.

Pressure from interstate shippers, to remove the obvious discrimination arising from the fact that the carriers were not giving this service on interstate shipments, became so strong that the southwestern railroads, on October 1, 1931, made effective a tariff which provided for door service on merchandise moving by railroad which originated and terminated in the southwest. The tariff provided that this service would be rendered free when the shipment moved within a zone of approximately 300 miles. This zone was limited upon the theory that trucking competition was confined to that distance. With the exception of the Cotton Belt, this door service is performed by local draymen under contract. The Southwestern Transportation Company performs the service for the Cotton Belt with its own equipment, except at a few points where contract draymen are employed. We have found that the service which is rendered by our own trucks not only is far superior to that rendered for us by contract draymen, but is also much more economical.

Store-door Service Has Helped

The experiment with door service in the southwest has not proved an unqualified success. Several of the carriers participating in this service from the outset have viewed it as another scheme to increase deficits and accepted it only with dignified acquiescence. The rest of us, upon the whole, are satisfied but hardly contented with the results. Aided by advertising, by new expedited merchandise trains affording overnight service for distances up to 600 miles, and by intensive merchandise solicitation, the practice has been of unquestioned aid in enabling us to meet harassing conditions of the past year. It has been sufficiently tested to demonstrate the fact that, to be successful, the practice must be viewed as one extended to meet the service requirements of our patrons, rather than as a device to meet truck competition. Mistakes which the experiment has revealed are the imposition of special charges for the service except within the narrow free zone, under the mistaken assumption that the service was extended only because the trucks compelled it and that their competition was limited to short distances.

Similar experiments in door service have been made in New England, on the Pacific Coast and in Nebraska and Kansas. So far as I can learn, the results have been satisfactory in each of these territories. It is worth while to note that, after six months of operation,

the New England lines have removed zone limitations similar to the Southwestern 300-mile free zone, and now give the service free upon all traffic which originates and terminates within that region.

Truck Delivery of Carload Freight

In May of last year, the Cotton Belt made effective a terminal tariff at all common points in Arkansas and Missouri, which provides for pick-up and delivery of carload freight by truck in lieu of switching to industry or team tracks. Under this tariff, the railroad undertakes the transfer of the freight between the car and the platform of the patron. The service applies to all traffic except bulk freight, regardless of origin or destination; that is, there are no mileage or zone limitations. Originally the tariff provided that the patron must unload the freight from the trucks to his platform or vice versa. It was soon discovered, however, that such a provision was difficult to police and that it was about as cheap to do the loading and unloading ourselves as it was to delay the truck while our patrons performed that service. A supplement to the tariff has been filed which provides that additional service.

Upon the protest of our carrier neighbors, the Interstate Commerce Commission is investigating the practice. The objections which are voiced to the practice, among others, are that it is a scheme upon our part to raid the industries belonging to other lines, that it unlawfully extends our lines, and principally that it is a wasteful and extravagant practice. We are hopeful of a favorable decision in the case which is still pending before the commission, since, in our opinion, the experiment is proving beneficial to our patrons as well as to the railroad. It has greatly speeded the delivery of carload freight, enabling us to deliver the contents of a car within four hours, compared with a former average time of nearly that many days. Upon the basis of our experience to date, the practice will save between three and four days of terminal time out of every movement. Since the line-haul speed of our trains is greater, at least potentially, than that of trucks, door service is enabling us to overcome our former speed handicap, and in many cases it enables us to out-service the truck.

The claim that the practice was designed as a raid upon our neighbor's industries raises the question of title. That the construction of a turnout connection with an industrial track creates a vested interest to all of the traffic which the industry has, that happens to be located on that track, was as much of a surprise to me as it doubtless was to the industries. Certainly it is a title which our truck competitors have not respected. Indeed, we have heard of cases where railroads have constructed industrial tracks into industries already served by a competitor. However, it is significant that during the period in which the tariff has been in effect, but 23 per cent of the cars delivered under its provisions were delivered to industries located upon the tracks of other carriers, while 63 per cent were delivered to off-track shippers, and that with respect to the cars delivered to this latter class of shippers, by far the greater number were for movements for which there was direct truck competition.

Costs Less Than Switching

Far from being wasteful or extravagant, the practice has proved economical. The average cost of rendering the service has been about $6 per car, in the neighborhood of half the cost of performing comparable switching service. In some cases, the per diem which we have saved has alone paid for the truck delivery cost. Over the period of the first six months of operation under the tariff, the amount which we saved under what the switching cost would have been, had the tariff not been in effect and had we received the same business, was more than twice the entire cost of performing the service. In other words, we have substantially increased the amount of the service to our patrons, particularly the off-track patrons, and at the same time have saved money for ourselves. These delivery costs probably will be increased when the service is extended to the larger metropolitan cities, and in some may prove prohibitive. It is also to be remembered that multiple cars can be switched more economically than they can be trucked, which condition will continue at least until the day of equipment which is interchangeable between railroad car and motor truck. Carload delivery of freight is not a magic talisman nor a cure-all of the problem presented by the truck. It does, however, mark a very definite stride forward toward an integration of transportation with industry.

So much then for the past and present; but what, of the future? It does not require a prophet to see that industrial necessity, as well as transport competition, will compel us to adopt door service for both carload and l.c.l. freight. We should do so quickly and ungrudgingly and make it an integral part of the service universally accorded all freight. It should be wholly divorced from special charges. This does not mean that the service should be rendered gratis; it does mean merely that it must be absorbed in the general run of expenses, and, therefore, paid out of the basic rates, which may be the same, higher or lower than those which are now charged. With the abandonment of these special charges will go all mileage and zone limitations, allowances and those other complex restrictions which have been thrown about the service. In short, we should treat the receipt and delivery of freight at the patron's door in precisely the same manner as we treat it at the team or industry track or at the freight house.

Store-door Service for Economy

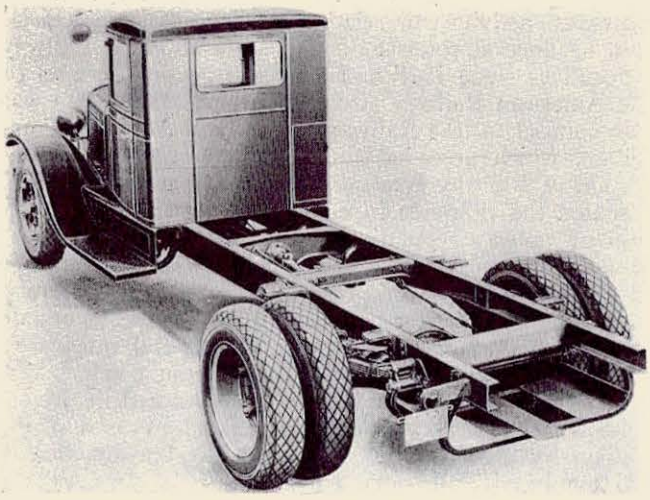
The level of freight rates is being forced down to meet the new commodity price levels. To survive, the railroad must find ways of reducing rather than increasing its operating costs. Under these circumstances, it is natural to ask, "Can the railroad afford to extend this new service?" The answer is that we cannot afford not to extend it. Door service, in and of itself, will make possible economies which will offset in part, if not entirely, the additional cost. Further, it attacks our operation at its most vulnerable spot. Out of every dollar which the railroad spends, nearly 50 cents must go for terminals, a service which is wholly incidental and collateral to the main job of moving the goods. Our exclusive right-of-way, which is so advantageous in the line-haul movement, becomes a positive handicap in terminals. The congested single roadway, our large vehicles and the large crew required to operate them, the carrier and urban congestion, and the enormous carrying charges upon our urban investments, make economical operation of terminals well-nigh impossible, and at the same time imperatively demand that intensive consideration be given to the possibility of motorizing these terminals.

At a time when confusion, if not despair, reigns in the transport world, when our old faiths are failing, when old routines are being jettisoned and old tenets being foresworn, let us not forget the cornerstone of our former greatness. To again attain that dominance in transport which our predecessors enjoyed, we must ever anticipate rather than yield to the needs of industry. We must make, not merely meet, competition!

A New Two-Ton International Truck

THE newest addition to the motor truck line of the International Harvester Company, Chicago, is a 2-ton, 6-cylinder unit designated as Model B-4. The truck is available in three wheelbases, 145 in. for semi-trailer service and 170 in. and 185 in. for general hauling. The maximum carrying capacity of the truck, including cab, body, equipment and payload, is 8,000 lb.

The engine of the truck, which is of International Harvester design and manufacture, develops 63 brake hp. at 3,200 r.p.m. The bore of the cylinders is 3 7/16 in., the piston stroke 4 in. and the piston displacement 222.7 cu. in. A maximum torque of 154 lb.-ft. is developed at 800 r.p.m. Among the notable features of the engine are the 69-lb. counterbalanced 4-bearing crankshaft; the removable cylinders, which permit the replacement of one or more cylinders without the expense of reboring; the hardened exhaust-valve-seat inserts; full-force-feed lubrication; the thermostatically controlled



The Chassis of the International Harvester Company's New Two-Ton Motor Truck

cooling system; and downdraft carburetion. The engine has 3-point mounting with rubber-cushioned rear supports.

The clutch is an 11-in. single plate with a built-in vibration damper, and the clutch, the 4-speed transmission and the engine are mounted as a unit. High road speed is possible in high or direct gear, while the three lower reductions proportionately increase the pulling ability of the engine.

In contemplation of capacity loads, the truck has been provided with a frame of heavy pressed steel channels. These channels are 8 in. deep and are tapered at the front and rear ends to provide for low loading-platform height. The channel-type cross members are gusseted to the side rails. In the full-floating, spiral-bevel-drive rear axle, a heavy, rigid, banjo-type, malleable-iron housing is used. The axle reductions are 5.625 to 1 and 6.5 to 1. The spiral-bevel pinion and driven gear, as well as the differential gears, are of alloy steel, and the pinion is straddle-mounted on all bearings.

The leaves of all springs are of alloy steel. The front and rear springs are of the semi-elliptic type and there is an auxiliary rear spring also of the semi-elliptic type. The propeller shafts are equipped with universal joints of new design, known as the roller bearing, anti-friction type. An intermediate shaft and three universal joints are provided, a fully-enclosed ball bearing in a self-aligning housing supporting the rear end of the intermediate shaft. Mechanically operated 4-wheel service brakes are also standard equipment.

Traffic Increased in 1932 by M-K-T Subsidiary

THE provision of store-door pick-up and delivery service for l.c.l. freight continued to bring increased traffic to the Missouri, Kansas & Texas Transportation Company in 1932. The transportation company is a subsidiary of the Missouri-Kansas-Texas and is engaged in the transportation of l.c.l. freight, contracting with the railway for station-to-station movement and with local trucking concerns for truck operation incident to the pick-up and delivery work.

During 1932, the l.c.l. freight billed outbound by the transportation company aggregated 50,649,456 lb., an increase of 10,640,212 lb. over the amount of freight handled by the transportation company in 1931. In the latter year, a total of 40,009,244 lb. of merchandise was handled. The revenues of the transportation company likewise increased. Total revenues in 1932 were $336,233.85, as compared to $311,897.83 in 1931.

During each month in 1932, the tonnage handled by the transportation company exceeded that handled in the same month of the previous year, the increases having ranged from as little as 106,213 lb. in January, 1932, as compared to January, 1931, to 1,486,782 lb., in June, 1932, as compared to the same month in the previous year. Increases in the monthly revenues of the company, 1932 over 1931, were scored in nine months of the year, while there were decreases during three months of the year. The largest decrease in revenue was suffered in July and this was accounted for by the fact that July, 1932, was the first month in which the federal sales tax on various commodities was effective. A large number of concerns in M-K-T territory laid in supplies during

Missouri, Kansas & Texas Transportation Company Revenues, 1932 and 1931

	1932	1931	Increase or Decrease in 1932	
Jan.	$27,376.48	$27,739.31	.....	$362.83
Feb.	25,779.97	23,861.94	$1,918.03	.....
Mar.	28,188.68	24,768.98	3,419.70	.....
Apr.	29,539.40	24,150.34	5,389.06	.....
May	29,208.15	24,071.25	5,136.90	.....
June	29,081.30	25,411.57	3,669.73	.....
July	23,640.42	25,471.29	.....	1,830.87
Aug.	30,898.69	28,322.45	2,576.23	.....
Sept.	33,636.56	29,928.31	3,708.25	.....
Oct.	31,402.23	30,721.23	681.00	.....
Nov.	27,263.03	26,567.36	695.67	.....
Dec.	20,218.95	20,883.80	.....	664.85
Total	$336,233.85	$311,897.83	$27,194.57	$2,858.55

L.c.l. Merchandise Billed Outbound by Transportation Company in 1932 and 1931

	1932	1931	Increase, 1932 over 1931
Jan.	3,641,637 lb.	3,535,424 lb.	106,213 lb.
Feb.	3,433,034 lb.	3,041,483 lb.	391,551 lb.
Mar.	4,011,665 lb.	3,031,229 lb.	980,436 lb.
Apr.	4,270,143 lb.	3,134,351 lb.	1,135,792 lb.
May	4,380,035 lb.	2,995,959 lb.	1,384,076 lb.
June	4,564,162 lb.	3,077,380 lb.	1,486,782 lb.
July	3,648,592 lb.	3,172,923 lb.	475,669 lb.
Aug.	4,919,714 lb.	3,612,161 lb.	1,307,553 lb.
Sept.	5,359,856 lb.	4,014,110 lb.	1,345,746 lb.
Oct.	4,962,530 lb.	4,093,246 lb.	869,284 lb.
Nov.	4,324,251 lb.	3,439,574 lb.	884,677 lb.
Dec.	3,133,837 lb.	2,861,404 lb.	272,433 lb.
Total	50,649,456 lb.	40,009,244 lb.	10,640,212 lb.

June in advance of the effective date of the tax law. The tonnage and revenues of the transportation company are shown by months in the accompanying tables.

Part of the gains made by the transportation company are considered to represent tonnage which the railroad would have carried if no transportation company service had been available, but it is held that this does not, by any means, represent the total increase in the transportation company's business. During November, 1932, the combined merchandise tonnage of the transportation company and the railroad showed an increase of 342,867 lb. over the tonnage handled by the two in November, 1931. While this was the only month during the year when the combined tonnage represented an increase in the total business handled, over that in the same month of the previous year, during several months the combined tonnage closely approached the previous year's figures, while the tonnage of the railroad alone for the year showed a sharp decline.

Recent re-adjustments of train schedules on the railway, all of which are utilized in the movement of transportation company freight, are attracting additional business. Overnight merchandise service was established recently between north and south Texas cities, giving first-morning delivery between Dallas, Ft. Worth and Waco, and Austin, San Antonio, Houston, Galveston and intermediate points, and between San Antonio, Austin, Houston and Galveston. By providing set-out cars for important stations and improving the movement of freight to smaller local stations, first-morning delivery from distributing points to practically every station on the railway in Texas is being offered. This faster railroad service, with the addition of pick-up and delivery service offered by the transportation company, is proving effective in recovering traffic lost to competitive motor trucks. The present transportation company service is as fast as that offered by any of the truck lines operating in the same territory, and in a number of cases it is even faster. For example, freight received at Dallas and Ft. Worth stations after the close of the day's business is delivered at San Antonio soon after 6 a.m., the arrival time of the new, fast freight train. This is a faster schedule than is offered by competitive motor trucks.

In addition, certain rate adjustments have been made. An especially successful new rate is that on a grocery mixture, including approximately 100 articles handled by manufacturers, wholesalers and retailers, such as canned goods, coffee and tea, candy, cheese, flour, fresh fruits and vegetables, lard, soap, sugar, etc. The rates are sufficiently low to attract business from company-owned or private trucks to the facilities of the transportation company.

Aishton and Gormley Head the A. R. A.

(*Continued from page 451*)

way Association. He became chairman of the executive committee of the Association of Railway Executives in 1924 and in 1929 he also became general chairman of the Presidents' Conference Committee on Federal Valuation of the Railroads in the United States.

Mr. Gormley entered railway service in 1893 on the Chicago & North Western at Eagle Gove, Iowa, and for the following four years he was engaged in various capacities in the maintenance of way and building departments of that road. In 1897 he became stenographer to the division superintendent of the North Western at Boone, Iowa, where he remained until 1899, when he became a stenographer to the general superintendent at Chicago. During the following year he served as a chief clerk and trainmaster and subsequently he was appointed chief clerk to the general manager. Later Mr. Gormley held the positions of chief clerk and assistant to the vice-president and assistant to the president of the North Western and in 1917 he became general agent for the American Railway Association at military headquarters at Chicago where he assumed the responsibility for the handling of troops and military supplies in central territory.

At the institution of federal control of the railroads at the end of 1917 he was appointed operating assistant to the regional director of the Western region and when the Western region was divided into three sections he was appointed assistant regional director of the Northwestern region. At the conclusion of federal control Mr. Gormley became director of the division of transportation of the American Petroleum Institute of New York, with headquarters at Chicago, where he remained until 1921 when he was appointed chairman of the car service division of the American Railway Association. On November 21, 1929, Mr. Gormley was elected executive vice-president.

Alfred Pembroke Thom has been in charge of the railroads' activities in relation to Congressional legislation as general counsel of the Association of Railway Executives since 1917 and has been general counsel of the American Railway Association since 1922. He was also counsel for the Railway Executives' Advisory Committee, which preceded the organization of the Association of Railway Executives, and in that capacity represented the railroads in connection with the investigation of railway regulation conducted by the joint congressional committee known as the Newlands committee in 1916. He has also represented the railroads generally in many of the larger proceedings before the Interstate Commerce Commission, such as the general rate cases. He was born at Elkington, Northampton county, Virginia, December 15, 1854. He was educated in private schools, Richmond College, Richmond, Va., and the University of Virginia. He began his law practice in 1876 and in 1879 became a member of the firm, Ellis & Thom, in 1883 a member of the firm of Tunstall & Thom, and in 1911 a member of the firm of White, Tunstall & Thom. In 1891 he was appointed receiver of the Atlantic & Danville, now a part of the Southern, and in 1894 he became general counsel of the same road. In 1899 he was appointed counsel in Virginia for the Southern and in 1902 became general counsel at Washington.

Robert V. Fletcher was born in Grant county, Ky., on September 27, 1869. He attended Spencer Institute and studied for a time at the University of Mississippi. In 1898 he was admitted to the Mississippi bar and practiced law with the firm of Mitchell & Fletcher at Pontotoc, Miss., until 1906, when he became assistant attorney general of the State of Mississippi. In the following year he was advanced to the attorney generalship and in 1908 was named a judge of the Supreme Court of Mississippi. In 1909 he became a member of the firm of Flowers, Fletcher & Whitfield, representing the Gulf, Mobile & Northern as attorneys for Mississippi. From 1911 to 1919 he was general attorney of the Illinois Central. During the period of federal control, he was assistant general counsel of the Railroad Administration at Washington. In 1920 he returned to the Illinois Central as general solicitor and in 1928 he was appointed general counsel of that system, in which capacity he has since continued, serving also as chairman of the Legislative Committee of the Association of Railway Executives.

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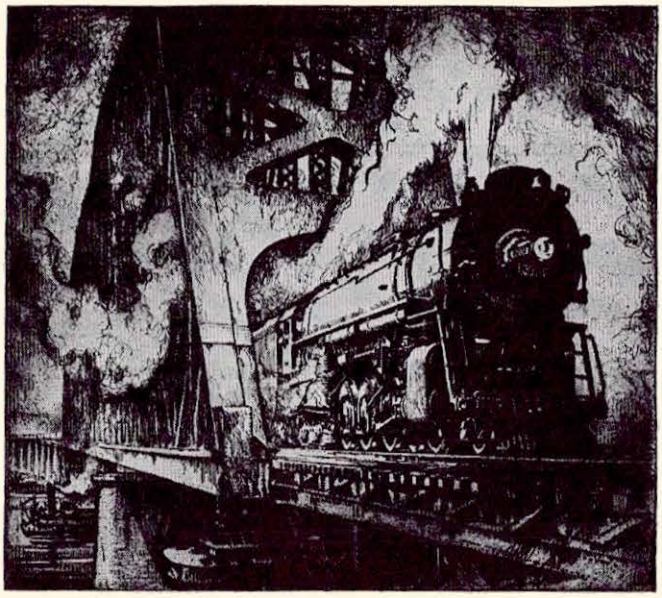

WHAT MODERN LOCOMOTIVES *mean* TO FUEL ECONOMY

"The development of fuel economy can be seen in the following illustration of typical freight engines of 10 and 20 years ago, compared with typical engines of today:

	1912	1922	1932
Fuel economy	6½ lbs. coal per drawbar horsepower	5 lbs. coal per drawbar horsepower	3 lbs. or less coal consumption per drawbar horsepower hour

—Wall Street Journal, February 24, 1933

With 83% of the locomotives on Class 1 roads today more than 10 years old, the greater economy resulting from full use of modern motive power is obvious.

LIMA LOCOMOTIVE WORKS, INCORPORATED
LIMA OHIO

LIMA LOCOMOTIVE WORKS INCORPORATED

NEWS

Regulate All Transport Agencies, Says Johnson

Business school dean places blame for delay in the matter on Senator Couzens

Dean Emory R. Johnson of the Wharton School of Finance and Commerce of the University of Pennsylvania, speaking at the Alumni Institute of that school on March 24, urged the necessity for the regulation of all forms of transport—delay in effecting which he placed squarely at the door of Senator Couzens of Michigan.

"When transportation agencies are competitive," he said, "as all such agencies now are, government aid or restriction of one class of carriers cannot fail to handicap or assist the other classes of carriers. No one class lives to itself alone, hence the policy of government regulation of railroads, and of carriers by road, water and air must take into account the interrelation of all kinds of carriers and the general unity of the service of transportation as a whole.

"Government regulation of the several agencies of transportation in the United States has not been in accordance with this fundamental principle. The present and future problems of government regulation of the railroads will not be rightly solved until the same general principles, though not necessarily the same provisions, of regulation are applied to all classes of carriers.

"While, as has been pointed out by representatives of the railway executives and by others, there are several changes that may well be made in the present interstate commerce act, some of which will appreciably reduce the scope of government regulation, the major problem of transportation regulation is not the present over-regulation of railroads, but the lack of regulation of other carriers.

"Fortunately for our purpose, the views of the business men of the country have recently been obtained by the Chamber of Commerce of the United States. Twelve recommendations made by the Special Railroad Committee of the Chamber of Commerce were, in October last, submitted by the Board of Directors of the Chamber for referendum vote to its membership, which is composed of the business organizations throughout the country. The results of this referendum were announced in January of this year. There were about 2,300 votes cast, and on most of the recommendations the negative vote was from 2 to 10 per cent of the total."

Dean Johnson then reviewed the proposals presented in this questionnaire which showed American business to be overwhelmingly in favor of recapture repeal, a modification in the rule of rate-making, an end to formal valuation, a simplification of regulation and its application to all forms of transport, and permitting the railroads to operate other transport agencies. Dean Johnson also favored modification of the long and short haul clause and a simplification of freight classification and tariffs.

"Reports now coming from Washington," he continued, "give some basis for hope that there may soon be an end to the dilatoriness that Congress has shown in regard to legislation for the regulation of transportation agencies other than the railroads. The inactivity of Congress as regards transportation regulation has been in no small measure due to the man who has recently ceased to be chairman of the Senate Committee on Interstate and Foreign Commerce."

Scholarship at Stevens Institute of Technology

The Mechanical Division, American Railway Association, has an unawarded scholarship at Stevens Institute of Technology, for the term beginning in September. This scholarship is available to the sons of members of the Mechanical Division, and the course leads to the degree of mechanical engineer. The course offered also includes instruction in electrical, civil and other branches of engineering.

More Time Allowed for Locomotives with Power Reverse Gear

On petition of certain railroads for additional time in which to prepare specifications and to obtain materials necessary to the application of power reverse gear on locomotives built prior to April 1, 1933, under the order issued by the Interstate Commerce Commission on January 5, the commission has announced a modification to postpone the requirement to make it effective on locomotives turned out of shops on and after July 1, the first time they are given repairs of Class 3 or heavier.

Freight Traffic In January

Freight traffic moved by the Class I railroads in January amounted to 19,985,649,000 net ton-miles, according to reports compiled by the Bureau of Railway Economics. Compared with January, 1932, this was a reduction of 2,869,701,000 net ton-miles, or 12.6 per cent, and it was a reduction of 10,322,555,000 net ton-miles, or 34.1 per cent, under January, 1931. In the Eastern district, the total showed a reduction of 9.4 per cent compared with the same month in 1932; in the Southern 9.7 per cent, and in the Western 18.2 per cent.

Whitney Champions I. C. C., Denounces Consolidation

Urges Senate investigation of railways, suggests Wall Street "manipulation"

A. F. Whitney, chairman of the Railway Labor Executives' Association, has, in one public statement, come to the defense of the Interstate Commerce Commission and in another has given his adverse opinion on the plan for consolidation of the railways into a small number of regional systems, which, according to rumor, is being prepared by F. H. Prince, Boston banker, with the assistance of J. W. Barriger, railroad analyst of New York.

As to the commission, Mr. Whitney maintains, "No department of the government has functioned more efficiently or economically and we believe it should not be disturbed. We urge that the functions and personnel of the Commission and its staff which have been developed over a period of 45 years to meet vital needs for protection of public service and public safety should not be impaired by ill-considered and hasty efforts to promote economy at the expense of all the interests which are here deeply involved.

"We believe that in justice to the railroads and their employees and the public that the jurisdiction of the Commission should be extended to cover not only railroad but highway and all other forms of transportation and that it should be allowed to continue its work in the future as in the past as free from political interference and as independently as the United States Supreme Court."

"Any scheme," the statement on consolidation reads, "to bring about further mergers of our American railroads means the sacrifice of proper service to communities, the impairment of property values in cities where terminals and shops are abandoned, the loss of positions to thousands of employees, and a frantic effort to force the public to continue to pay a return upon a capital structure that should be materially pared down to fit present values and needs of the immediate future.

"The Railway Labor Executives' Association is unalterably opposed to any scheme that suggests further railroad mergers at the expense of the public and the railroad employees, and has requested a Senatorial investigation of the railroads, including their capital structures, the manner in which they have been manipulated by Wall Street in the past, and all other factors entering into the railroad situation that the public may have the truth and more fully understand why the railroads at this time are unable to meet their fixed charges."

Motor Payments Unlike Railway Tax Assessments

Fees paid by highway carriers are in reality rental charges, says E. E. Shumaker

License fees and gasoline taxes paid by motor carriers should be regarded as rental charges for the use of public facilities for profit and when thus properly considered such assessments "are really not taxes in the same sense that railroads are taxed," said E. E. Shumaker, former president of the R.C.A. Victor Company, in a recent address, entitled "Can We Afford Motor Truck Transportation?" at the seventeenth annual dinner of the Camden (N.J.) County Real Estate Board.

"Imagine the joy of the railroad companies," Mr. Shumaker said, "if the taxes they pay each year were expended by the federal government and states to improve and maintain their tracks and right-of-way and if the adjoining property owners and other taxpayers paid the balance of their construction and maintenance of way costs. Such a situation would only be fair. It is precisely what is being done to permit trucks to compete with the railroads, the country's largest taxpayer."

In opening his remarks Mr. Shumaker stated that he had selected the railroad problem as his subject "because I am convinced that it's our problem and that it cannot be solved until the public generally is aroused and brought to a full realization of what is going on and what it means or will mean to them." He thought that once the public understands the seriousness of the situation we can be sure that the public interest will be protected.

Mr. Shumaker then proceeded to his analysis of the problem and to prove "that a change from rail to truck transportation is not desirable and that motor truck transportation cannot economically take the place of our railroads," he quoted figures on the estimated cost of equipping and operating the motor transport industry to do the railroad job and hypothesized several ridiculous set-ups which would result.

"It would," he said, "require approximately 8,500,000 motor trucks and buses to handle all the freight and passenger traffic of the country. At an average cost of $3,000 each, these buses and trucks alone would require a capital investment of $25,500,000,000 and it is estimated that other equipment and property, including the necessary additional roads would cost at least as much more, making necessary the staggering total investment of over $50,000,000,000 whereas the total capital invested in all kinds of steam railroad property in the United States amounts to only $26,000,000,000 or one-half as much to do the same thing. How could that help business or the public? We need lower not higher costs of transportation."

Continuing, Mr. Shumaker quoted statistics showing that payments by motor vehicles do not meet the nation's highway bill and then asked why the public should thus "subsidize a more costly method of handling their freight and passenger traffic and at the same time destroy the billions they already have invested in railroad securities."

"Motor trucks," he continued, "like their predecessor, horse drawn vehicles, have their place in transportation, but it certainly does not seem to be in trying to compete with the railroads, especially for long haul traffic, and it is my opinion that every shipper who utilizes truck service for his long haul freight is simply kidding himself. He may temporarily save some money, but it will be at the expense of some one else, and, if through his support of truck transportation, he succeeds in wrecking our railroads, he will have plenty of cause to rue the day he became penny wise and pound foolish. Many shippers are using motor truck service. Are they taking into consideration what will happen if our railroads are forced into bankruptcy? Do they realize that they then would have to ship everything by truck and that the costs would be much higher?"

Passenger Service Restored

The Pennsylvania has restored the Rainbow, westbound No. 43, leaving New York at 11:30 p. m. which was taken off at the beginning of the bank holiday. The New York Central also has restored the trains which were taken off.

P. R. R. Wage Cut

Salaries of officers and non-unionized employees of the Pennsylvania were reduced another 10 per cent, effective March 1. This makes a total reduction of about 31 per cent for officers and of 28 per cent for the unclassified forces.

New England Railroad Club

The New England Railroad Club will hold its next meeting on Tuesday evening, April 11, at Hotel Statler, Boston. Joseph C. McCune of the Westinghouse Airbrake Company will speak on recent developments in airbrakes for freight service.

Illinois Electrification Bill Again Introduced

A bill to prohibit railroads within cities of over 1,000,000 inhabitants from using after 1935 any motive power except electricity has again been introduced in the Illinois legislature, this time as House Bill 481, with a penalty of $1,000 for each day's non-compliance. A similar bill was introduced in January, 1931, and was tabled two weeks before adjournment late in June.

Chicago Traffic Club Elects Officers

The Traffic Club of Chicago, at a meeting on March 21, elected the following officers for the ensuing year: President, W. D. Beck, district manager, Car Service Division, American Railway Association; first vice-president, W. Y. Wildman, traffic manager, Illinois Coal Traffic Bureau; second vice-president, T. J. Shea, assistant general freight agent, Great Northern; third vice-president, J. W. Bingham, traffic manager, Corn Products Refining Company; secretary, R. W. Campbell, manager, traffic department, Butler Paper Corporations; treasurer, J. H. Howard, manager, Western Weighing & Inspection Bureau.

Consolidation No Panacea Cornwell Tells Bond Men

Praises stand on transport question taken by Roosevelt in Salt Lake City speech

Addressing the bond club of Philadelphia on March 22, John J. Cornwell, general counsel of the Baltimore & Ohio, questioned the possibility of solving the nation's transport problem quickly by railway consolidation. "There are still people," he said, "who believe the railroad situation may be solved overnight by an act of Congress combining all the railroads into one system, or two systems, or a fewer number of systems than yet proposed. They overlook the gigantic problem the Interstate Commerce Commission encountered in its effort to evolve a plan for consolidating them into a score or more of groups. There is danger that in this period of anxiety on the part of railroad security holders and of impetuosity on the part of the public to have something done, sentiment for hasty, ill-advised Congressional action may become so general as to be irresistible.

"The program for stabilization and rehabilitation of railroad securities and for the preservation of the railroads, a necessary transportation agency, which President Roosevelt outlined in his speech at Salt Lake City during the campaign, is clear-cut, definite, sound, and will be effective if carried out. It is the plan which investors, railway managers and the public all can and ought to support.

"First, he said that the government should stand behind the railroads for a reasonable length of time. I do not think that means the government should lend money to an insolvent road. I assume it was intended that the government should continue to make necessary loans to essential railroad systems, not over-capitalized, which, in normal times, not only have earned their taxes and interest but paid a dividend to those who own their capital stock.

"There is a good reason for liberalizing the policy of government loans, aside from the fact that the government, by regulating rates, naturally restricted the earnings of the railroads in periods of high prices, and that is, the railroads have had to face in more recent years keen competition which government, state and national, has fostered, sponsored and aided and used tax money paid by the railroads in so doing. In the past score of years many hundreds of millions of dollars of tax money have been expended to deepen inland waterways. The states, aided by the federal government, in the same period, have expended twenty-three billions in the construction of modern highways, originally designed for public travel, but many of which rapidly are being preempted by heavy freight carriers. Congress, with an unbalanced budget, voted a mail subsidy to the aviation companies of fifteen millions of dollars. Had it voted a mail subsidy of one-fourth as much per pound of mail to the railroads, all of them would pay not only their bond interest this year, but most of

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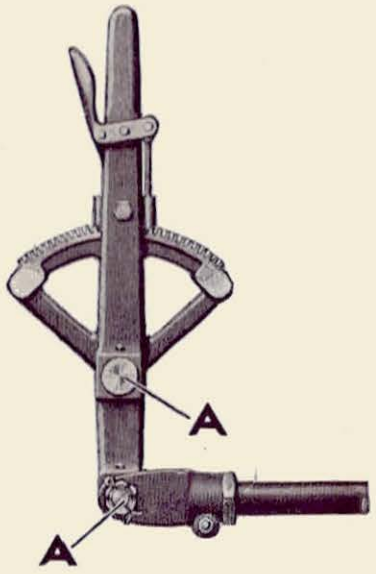
FRANKLIN TYPE "E"

AFTER TEN YEARS



A. No pins have ever been replaced.

B. No renewals of rocker arm or metallic seating ring.

C. Original glands are intact.

D. Packing rings have been replaced each shopping period only, because it is the Railroad Company's practice.

E. No cylinders have required re-boring.

F. No valves have been replaced.

G. The trunks were started with a diameter of 3.25" on 26 different places measured on each of the four original trunks of these gears. The maximum dimension was 3.248" or .002" wear, and the minimum dimension was 3.21" or .04" wear, the average being approximately 3.24" or .01" wear in ten years. While this is remarkable, it is only what we started out to obtain.

FRANKLIN RAILWAY SUPPLY

POWER REVERSE GEAR

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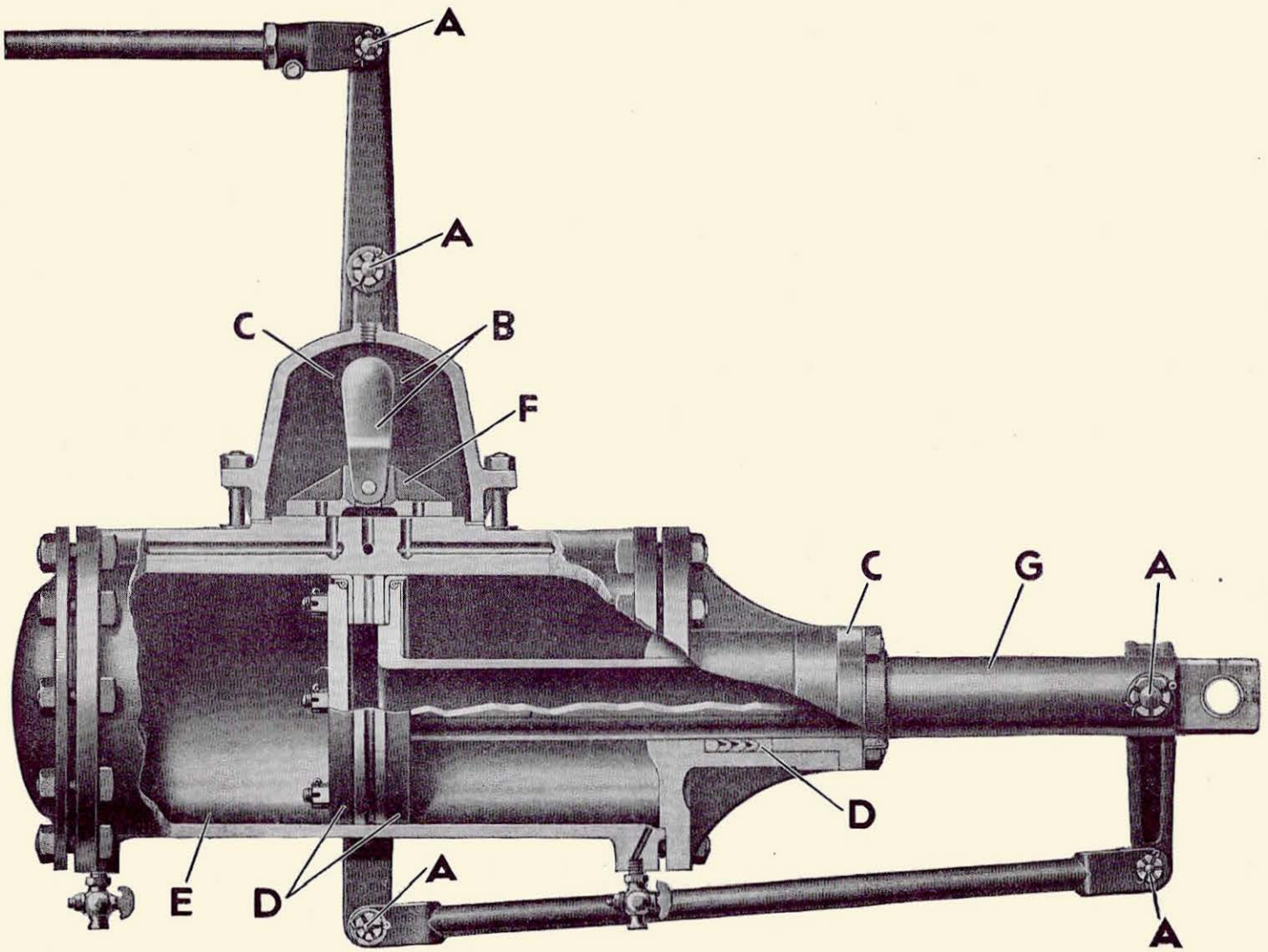
- low maintenance
- proved performance



COMPANY, INC., NEW YORK, CHICAGO, MONTREAL

them would pay dividends also. This subsidy was voted on the theory the government was encouraging the expansion and development of the aviation industry for national defense purposes. Well, have not the railroads played a vital part in national defense?

"Another very definite proposal contained in the President's address to which I have referred was that all transportation agencies be brought under federal control and regulation. Is there any doubt as to the desirability of this? When the Interstate Commerce Act was passed and the Interstate Commerce Commission created to control and regulate the railroads, they had a monopoly on transportation. Inland waterways had not been developed and the Panama Canal had not been constructed. The railroads were able to compete with water transportation from the Atlantic to the Pacific Coast, and vice versa, when ships had to sail around the Horn, but conditions have changed entirely.

"Huge trucks, regular or contract carriers, traverse every important highway. The instability of their rates not only is seriously affecting the railroads, but has been quite demoralizing to many business enterprises. No one business concern knows exactly what the other's transportation cost is when commodities are transported by truck, and these charges are subject to change at any time. Because of the instability and uncertainty of transportation costs, business in many lines of industry today is being done in the dark.

"So, the President's proposal to bring all forms of interstate transportation under government control and regulation not only is desirable from the standpoint of the railroads, in which so much of the people's money is invested and the preservation of which is so necessary to the business of the country, but it is also apparent that it is desirable from the standpoint of the general public welfare."

Lunch Cars on N. Y. C.

The New York Central has placed in service on its "Day Coach DeLuxe" train No. 1 between New York and Buffalo, a dining car in which half the length is fitted with lunch counters at which passengers face the windows, seven passengers on each side; while the other half has tables in the ordinary style. At the counters plate luncheons are served at various prices, up to sixty-five cents.

Conciliation Board Weighs Canada's Wage Case

Justice G. F. Gibsone of the Superior Court of the Province of Quebec, has been appointed by the Minister of Labor of Canada as chairman of the conciliation board which will investigate the wage dispute between the Canadian railways and their employees. The other two members of the board are George C. McDonald, of Montreal, and W. F. O'Connor, of Toronto, appointed on the recommendation of the railway companies and employees respectively. The appointment of the chairman was made by the minister in the absence of a joint recommendation from the other board members.

The dispute involves a proposed 20 per cent wage reduction by the Canadian National and the Canadian Pacific, together with subsidiary lines. The employees include locomotive enginemen, firemen, conductors, trainmen and telegraphers.

Pennsylvania Standby Power Service

The Pennsylvania has arranged for a standby power service for the newly electrified section between New York and Philadelphia. It will be provided by a 25,000 kw. frequency converter set. This set will change 60-cycle three-phase current to 25-cycle single-phase for use by the railroad.

The equipment, which is being built at the Schenectady Works of the General Electric Company, will be installed in the Metuchen switching station of the Public Service Electric & Gas Company of New Jersey, and will go into operation about the middle of 1934.

St. Louis Transfer Case Settled

The anti-trust suit brought by the Central Transfer Company of St. Louis, Mo., against the Terminal Railroad Association of St. Louis, in an effort to prevent that company from entering into a contract with the Columbia Terminals Company for the hauling of all l. c. l. freight for the railroads between St. Louis and East St. Louis, Ill., has been dismissed by the United States Supreme Court, following its approval of the ruling of the United States Circuit Court of Appeals. The Central Company had charged that the contract violated the provisions of the Sherman Act since it eliminated the Central Company from freight transfer business in St. Louis.

Road Tests of Type-AB Brake

Official A. R. A. road service tests of the Type-AB experimental air brake for freight cars were started on the Pennsylvania at Johnstown, Pa., on March 17. It is expected that these tests will consume from two to three weeks. The tests are being made with 150-car trains in various combinations of loaded and empty cars and with mixed trains having the new brake and the present K-2 brake. The tests are under the direction of the Committee on Safety Appliances.

Representatives of railroads and car owners are privileged to witness any part or all of these tests. Those desiring to witness the tests should get in touch with H. A. Johnson, director of research in charge of the power brake investigation, at the Fort Stanwix hotel, Johnstown, Pa.

C. P. R. 1932 Earnings

The Canadian Pacific in 1932 had gross revenues of $123,936,714, as compared with $142,337,648 in the preceding year. Operating expenses for the year totaled $103,846,729, compared with $116,654,776, leaving net at $20,089,985, against $25,682,872 in 1931. Special income for 1932 at $4,537,425 compared with $10,951,964 in the preceding year, leaving total income of $24,627,410, against $36,634,836 in the preceding year. Deduction of fixed charges for 1932 at $23,619,529, left a surplus for the year of $1,007,881, as contrasted with $14,584,472 in the preceding year. Deduction for pension fund of $750,000, left net revenue at $257,881, while preferred dividends of $2,745,138, being the half-yearly dividend paid on October 1, 1932, left a net debit chargeable to surplus of $2,487,257.

The directors of the company meeting in Montreal last week announced that no further dividends, preferred or common, will be paid for 1932.

Fourth Section Relief Granted as to Southern Rates

The Interstate Commerce Commission has issued orders granting fourth section relief authorizing to carriers participating in class rates between points in southern territory and between points in that territory and points in official territory, constructed on the bases prescribed or approved in the southern class rate investigation, and commodity rates made on a percentage relation to those rates, to apply over all routes between those points the lowest rates applicable over any route between the same points constructed on those bases, subject to certain conditions set forth in the report. Similar relief was granted to carriers operating routes wholly or in part through southern territory between points in official territory and points on the border.

Prospective Railroad Beer Revenue Set at $100,000,000

The revenue to be secured by the railroads of the United States in the transportation of beer and materials used in its manufacture is estimated at $100,000,000 annually by Owen T. Cull, general freight agent of the Chicago, Milwaukee, St. Paul & Pacific. On the basis of the traffic handled in 1917, the revenue from beer itself will amount to $75,000,000. The construction of facilities for the manufacture of beer, it is estimated, will involve an outlay of $300,000,000, while the revenue to result from the transportation of the materials to be used in the construction of these facilities is estimated at $30,000,000. The estimates are based upon traffic handled by the Milwaukee in 1917. In that year, this railroad moved approximately 31,000 cars of beer from breweries in Milwaukee, Wis., and had about twice that number of cars inbound, carrying empty bottles and kegs and ingredients going into the brewing of beer.

Revenue Per Ton-Mile and Per Passenger-Mile Reduced

The effects of "whittling" of the railway rate structure, by numerous reductions in freight rates and special passenger fares is shown in the Interstate Commerce Commission's revenue traffic statistics for the twelve months ended with December 31, 1932. The average revenue per ton-mile for 1932 was 1.045 cents, as compared with 1.052 cents in 1931, notwithstanding the effect of the emergency surcharge which became effective January 4. For the month of December the average was brought down to 0.978, as compared with 1.037 in December, 1931. The average revenue per passenger-mile in 1932 was 2.219 cents, as compared with 2.513 cents in 1931. This includes commutation traffic for which, by itself, the average was 1.068 cents as compared with 1.064 in 1931. Excluding commutation traffic the average was 2.697 cents as compared with 3.062

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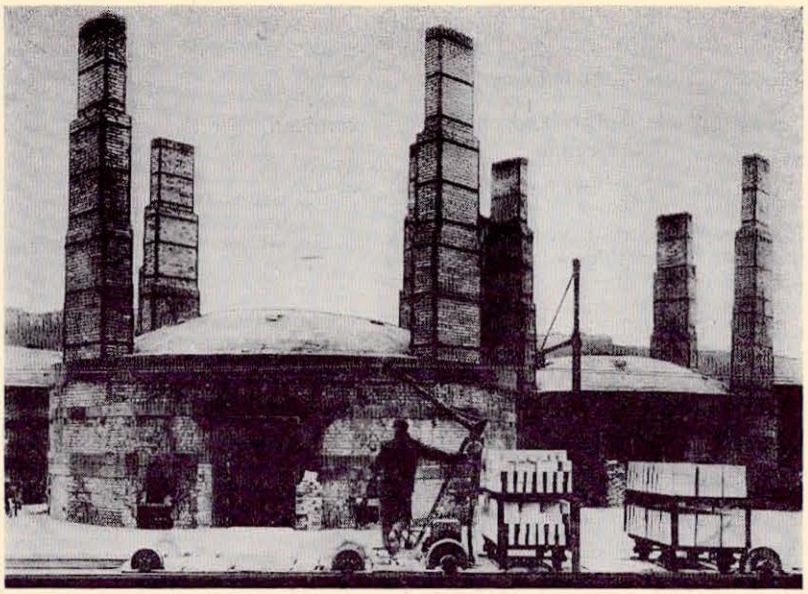

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Kentucky
Alabama
Missouri

NORTH AMERICAN REFRACTORIES CO.
Pennsylvania
Kentucky

IRONTON FIRE BRICK CO.
Ohio

DENVER SEWER PIPE & CLAY CO.
Colorado

ATHENS BRICK & TILE CO.
Texas

MOULDING-BROWNELL CORP.
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GLADDING-McBEAN & CO.
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cents in 1931. In December the average per passenger-mile was 2.187 cents as compared with 2.472 in 1931.

Cab Signals Authorized on the Lackawanna

The Interstate Commerce Commission, in a decision by commissioners Eastman, McManamy and Lee, issued on March 10, has granted the petition of the Delaware, Lackawanna & Western to be permitted to use automatic cab signals instead of automatic train control, as required by the orders of the commission in 1922 and 1924.

This road uses the Union Switch & Signal Company's continuous one-speed type (not coded). It is in operation between East Buffalo, N. Y., and Scranton, Pa., 256 miles, double track. The visual wayside signals are two-arm, two-position, lower quadrant semaphores, normal clear. Two caution indications are given for each stop indication; except that at the crossings of the Pennsylvania and the Erie three caution indications are given, and except on ascending grades where in certain cases but one caution indication is provided. Between Binghamton and Elmira, 57 miles, the semaphores have been superseded by color-light signals, three-indication. The locomotives equipped number 216. When a restrictive cab indication is displayed, the brakes are applied, unless the engineman operates the acknowledging device and at once reduces speed below the limit imposed by the speed governor.

Expenditures for maintenance and operation for the year 1931 amounted to $103,112 ($403 per mile of road) and it is estimated that cutting out the brake-setting apparatus will save $24,384 annually.

The petition sets forth that the elimination of undesired brake applications will result in a saving, and tables are given showing the falling off in traffic and in earnings. For the year 1932 there was a deficit, after taxes and charges, of $2,542,447.

The automatic speed governor is set at 20 miles an hour, this limit to be in force at all times when traveling under restrictive indications; and the company proposes, with the adoption of cab signals, one for the engineman and one for the fireman, to change the speed limit to ten miles an hour.

On the facts shown in the application, the report adopts the view of the company that with cab signals as proposed train movements between East Buffalo and Scranton will be adequately safeguarded, and the petition is granted. Specifications and requirements for operation are appended to the decision. The installation of cab signals, when completed, is to be subject to inspection by and the approval of the commission.

Railway Employment in December and January

The number of employees of Class I railways as of the middle of January was approximately 30,000 less than the number in December, according to the Interstate Commerce Commission's monthly tabulation of reports showing the number of employees. Beginning with January these statistics cover only Class I railways, excluding 17 switching and terminal companies that were formerly included. On this basis the number in January was 946,003, as compared with 976,825 on the same basis for December. Including switching and terminal companies the December total was 993,541, or 16,716 greater than that shown on the new statement.

The December total was a decrease of 19,674 under the number reported for November, largely in the maintenance of way and structures group, and it was 12.38 per cent less than that for the corresponding month of the preceding year. The total compensation in December was $119,846,545.

Reduced Passenger Fares in South Authorized

The Interstate Commerce Commission on March 16 issued a fourth section order authorizing the Louisville & Nashville, the Nashville, Chattanooga & St. Louis, the Mobile & Ohio, the Atlanta & West Point and the Western of Alabama to establish and maintain for an experimental period of six months passenger fares on the basis of 2 cents a mile good in coaches only and 3 cents a mile good in sleeping and parlor cars, without any surcharge, locally between points on their respective lines, even though the establishment of such fares results in aggregate fares lower than existing joint interline fares. The roads were also authorized to continue their present joint interline fares which are higher than the aggregate of intermediate fares, without observing the aggregate of intermediates provision of section 4 of the interstate commerce act.

On March 20 the commission also suspended until October 5 the order which it had entered on July 11, 1922, under which the Pullman surcharge was made applicable to intrastate traffic in Georgia, in so far as it applied to the Louisville & Nashville and the Nashville, Chattanooga & St. Louis.

Operating Revenues and Operating Expenses of Class I Steam Railways in the United States *

Compiled from the Monthly Reports of Revenues and Expenses for 151 steam railways
FOR THE MONTH OF JANUARY, 1933 AND 1932

Item	United States		Eastern District		Southern District		Western District	
	1933	1932	1933	1932	1933	1932	1933	1932
Average number of miles operated	241,399.20	241,638.53	59,625.44	59,724.14	45,885.35	46,121.15	135,888.41	135,793.24
Revenues:								
Freight	$179,239,405	$208,358,485	$77,856,188	$91,624,242	$39,461,694	$41,484,081	$61,921,523	$75,250,162
Passenger	26,653,677	38,022,953	16,144,488	22,346,038	3,396,728	4,751,292	7,112,461	10,925,623
Mail	7,731,719	8,350,084	3,002,201	3,267,007	1,332,141	1,437,449	3,397,377	3,645,628
Express	2,256,340	3,773,594	837,119	1,621,850	568,072	787,134	851,149	1,364,610
All other transportation	5,593,646	6,853,990	3,245,623	3,918,745	500,708	555,732	1,847,315	2,379,513
Incidental	4,580,083	6,147,114	2,655,216	3,574,534	679,712	846,639	1,245,155	1,725,941
Joint facility—Cr.	699,427	843,843	228,958	276,532	132,173	133,259	338,296	434,052
Joint facility—Dr.	199,159	234,425	56,160	65,074	20,207	19,344	122,792	150,007
Railway operating revenues	226,555,138	272,115,638	103,913,633	126,563,874	46,051,021	49,976,242	76,590,484	95,575,522
Expenses:								
Maintenance of way and structures	22,654,703	29,979,256	9,336,851	12,986,163	5,004,652	6,713,504	8,313,200	10,279,589
Maintenance of equipment	47,591,908	57,623,583	20,936,496	26,073,663	9,360,362	10,644,637	17,295,050	20,905,283
Traffic	7,298,549	8,817,156	2,671,981	3,325,924	1,436,969	1,725,891	3,189,599	3,765,341
Transportation	89,763,733	113,562,985	41,729,275	53,234,222	15,208,514	18,724,758	32,825,944	41,604,005
Miscellaneous operations	2,011,814	2,887,692	1,010,917	1,444,536	252,310	390,374	748,587	1,052,782
General	12,562,467	14,471,489	5,417,290	6,360,688	2,132,139	2,481,851	5,013,038	5,628,950
Transportation for investment—Cr.	203,414	309,768	48,026	91,449	34,468	17,902	120,920	200,417
Railway operating expenses	181,679,760	227,032,393	81,054,784	103,333,747	33,360,478	40,663,113	67,264,498	83,035,533
Net revenue from railway operations	44,875,378	45,083,245	22,858,849	23,230,127	12,690,543	9,313,129	9,325,986	12,539,989
Railway tax accruals	22,059,488	23,955,732	8,941,781	9,527,685	4,289,447	4,620,306	8,828,260	9,807,741
Uncollectible railway revenues	90,456	77,203	33,558	29,923	7,657	10,922	49,241	36,358
Railway operating income	22,725,434	21,050,310	13,883,510	13,672,519	8,393,439	4,681,901	448,485	2,695,890
Equipment rents—Dr. balance	6,608,272	6,977,319	3,456,215	3,609,812	408,296	475,492	2,743,761	2,892,015
Joint facility rent—Dr. balance	2,851,440	2,890,940	1,531,150	1,577,667	335,745	278,212	984,545	1,035,061
Net railway operating income	13,265,722	11,182,051	8,896,145	8,485,040	7,649,398	3,928,197	d 3,279,821	d 1,231,186
Ratio of expenses to revenues (per cent)	80.19	83.43	78.00	81.65	72.44	81.36	87.82	86.88

* Excludes switching and terminal companies. Statements prior to January, 1933, included switching and terminal companies. d Deficit or other reverse items.

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to Revision.

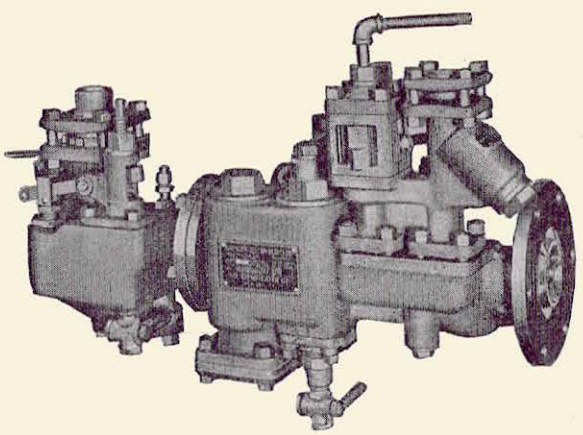
Continued on next left-hand page

A Pile of Coal

can be made to last longer if heat in part of the exhaust steam from the engine cylinders is returned to the boiler.

Getting heat into the boiler other than by way of the firebox is saving fuel. The Elesco exhaust steam injector accomplishes this by utilizing some of the exhaust steam for its operation. In this way heat otherwise wasted is returned to the boiler at no expense to the firebox . . . . resulting in fuel savings of 8 to 10 per cent.

Worthwhile, isn't it? Write today for details.



ELESCO SFX TYPE EXHAUST STEAM INJECTOR

Operating on the injector principle and using exhaust steam, it feeds the boiler with water heated to a high temperature.

THE SUPERHEATER COMPANY

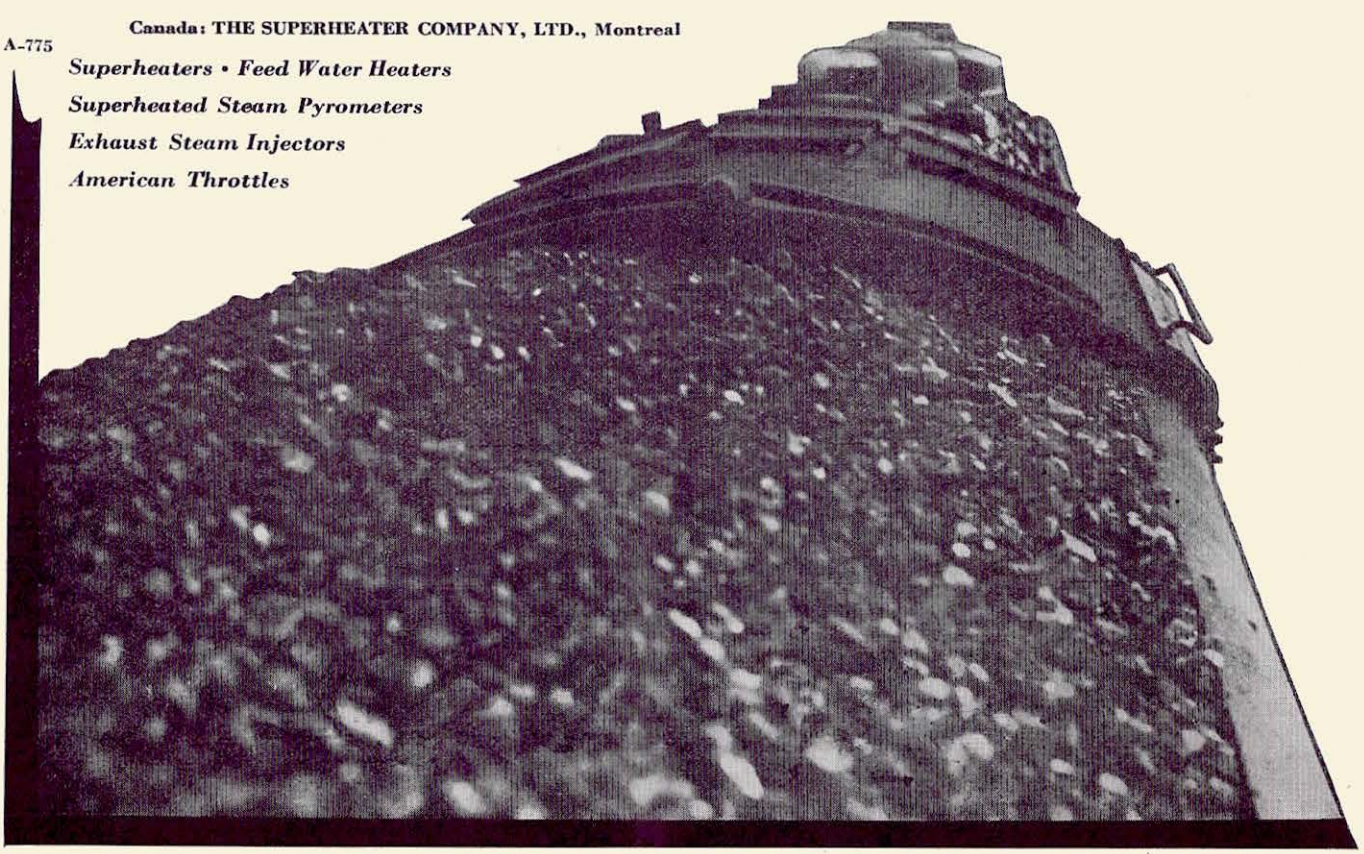
Representative of AMERICAN THROTTLE COMPANY, INC.

60 East 42nd Street, New York — Peoples Gas Building, Chicago

Canada: THE SUPERHEATER COMPANY, LTD., Montreal

A-775

Superheaters • Feed Water Heaters
Superheated Steam Pyrometers
Exhaust Steam Injectors
American Throttles



Similar suspensions were later announced as to Illinois and Alabama.

The Georgia Public Service Commission has revoked its earlier decision and on March 17 authorized the sale of tickets on these roads at the reduced rates, two cents and three cents a mile; but has announced that a hearing would be held on the general subject of passenger fare reductions.

New Cincinnati Passenger Terminal Opened Prematurely

Driven out of the old Central Union Station, Cincinnati, by flood waters of the Ohio river, the railways using that terminal moved into the new Union Station suddenly on Sunday, March 19, two weeks ahead of the scheduled date for its opening. Although many details were unfinished, all facilities were rushed into service and traffic was handled with little inconvenience or interruption. Southern train No. 15 was the first to leave the new station at 6 a. m. Sunday, while C. & O. train No. 5 was the first to arrive, at 7.10.

At the crest of the flood, the waiting-room floor and station tracks of the old Central Union Terminal were under five feet of water. The Pennsylvania-Louisville & Nashville station was maintained in service throughout the flood, although its abandonment was considered on Monday afternoon. Outside of the stations none of the roads was subjected to other than minor delays by reason of water.

The new terminal will be formally opened on the morning of April 1, at which time all passenger trains will be transferred to the new station.

Car Lines Protest Reduction in Allowances

A conference of railway presidents and representatives of private car lines, on the proposal of the carriers to reduce car allowances made to the car lines by the railroads, was held at Chicago on March 21 to give the car lines an opportunity to express themselves. The proposed reductions were opposed by the car line representatives who contended that the cost of operating cars was practically equal to the railroad allowance and the rental charged shippers and that a reduction in allowance would have to be passed on to the shippers who would be encouraged to use trucks.

According to B. C. Graves, vice-president of the Union Tank Car Company, the cost of operating that company's tank cars in 1930 was 2.29 cents per mile as compared with an average allowance of 1½ cents made by the railways and an average of 1½ cents paid by shippers. According to L. F. Wormser, general counsel of the General American Tank Car Corporation, the ownership costs and railroad allowances for that company in 1932 were as follows: Passenger express refrigerator cars, 3.33 cents, allowance 2.5 cents; Passenger milk refrigerator cars, 4.89 cents, allowance 2 cents; freight refrigerator cars, 2.21 cents, allowance 2 cents; tank cars, 2.19 cents, allowance 1.5 cents and stock cars 0.74 cents, allowance 1 cent. The carriers were asked to abandon any attempt to reduce allowances.

Truck Competition for Short-Haul Grain and Coal

Reductions of 50 per cent in rates on grain from nearby points to Cincinnati, Ohio, and Central Kentucky points as a means of meeting truck competition were suggested by shippers, at a meeting of the Cincinnati Board of Trade on March 14, to a committee representing railroads and country grain elevators. One elevator operator stated that through the co-operation of the Indiana State Farm Bureau and the National Grain Alliance, an arrangement has been reached whereby trucks can carry grain direct from the farms to Cincinnati at a rate of 2 cents a bushel and bring back coal to the farms from river operators at Cincinnati at about 75 cents a ton. According to his statement, the Indiana State Farm Bureau offices at Indianapolis can purchase the coal and, through the assurance of a back haul, the truckers are able to guarantee a rate per bushel for the grain movement which is far below that at which the railroads can make a profitable haul. With such an arrangement, he continued, the trade of the country grain elevators within a radius of 100 miles of Cincinnati, particularly in Southern Indiana, would be ruined. To avoid this, he suggested that the railroads serving the Southern Indiana and Ohio territory reduce their grain rates to Cincinnati from 9½ cents to 5 cents per 100 pounds.

Western Railway Club Discusses Car Problems

Opportunities for still further improvement in car design and also in maintenance practices were discussed at the regular monthly meeting of the Western Railway Club held Monday evening, March 20, at the Hotel Sherman, Chicago. The speaker of the evening was F. G. Moody, master car builder of the Northern Pacific. Mr. Moody discussed the requirements of box cars better adapted to meet the needs of specific commodity shipments, and outlined his views regarding a number of other important subjects, such as the necessity for easier riding freight cars; draft-gear maintenance; light-weight equipment; improved air-brake maintenance, particularly that of brake rigging; grinding chilled car wheels; the present necessity for less car inspection and more maintenance; and the desirability of utilizing present maintenance facilities in conjunction with systematic planning and scheduling of work to produce maximum results with the maintenance dollar.

Following Mr. Moody's address and a limited amount of discussion, S. G. Down, president of the Westinghouse Air Brake Company, outlined the objectives sought in the development of the improved Type-AB freight car brake, and explained briefly the advantages of this brake in reduced operating and maintenance costs and facilitated freight movement. Moving pictures of the A.R.A. brake tests in the Siskiyou (Cal.) mountains were then shown. Lantern slides of the various important parts of the new Type-AB brake equipment were explained by J. S. Fralich, district engineer of the Westinghouse Air Brake Company, Chicago.

Equipment and Supplies

FREIGHT CARS

THE WHEELING STEEL CORPORATION has ordered one motor-driven transfer car from the Koppel Industrial Car & Equipment Company.

SIGNALING

BOSTON & MAINE. This company has applied to the Interstate Commerce Commission for a modification of the orders requiring it to maintain and operate automatic train-control between West Cambridge, Mass., and East Deerfield.

CENTRAL OF NEW JERSEY.—This company has applied to the Interstate Commerce Commission for a modification of its automatic train-control orders to permit the operation of locomotives equipped with automatic cab signals in lieu of train-stop devices.

MISCELLANEOUS

THE BOSTON & ALBANY has ordered 625 tons of tie plates from the Jones & Laughlin Steel Corporation.

THE PENNSYLVANIA is inquiring for switches, bars, sheets, tubes and shapes of various kinds requiring about 10,000 tons of steel.

Construction

NEW YORK, ONTARIO & WESTERN.—The New York Public Service Commission has affirmed an order adopted in 1930 directing the elimination of the East Seneca street crossing of this road in the city of Oswego, N. Y. The estimated cost in 1930 was $175,000, excluding the cost of land and property damages.

CHICAGO, BURLINGTON & QUINCY.—In connection with the opening of the Great Lakes to the Gulf waterway, this company will convert a 176-ft. fixed span in its bridge across the Illinois river at Ottawa, Ill., into a vertical lift span. A contract for the fabrication of the steel has been awarded to the American Bridge Company, Pittsburgh, Pa., while contracts for the remainder of the work will be awarded later. The project has a total estimated cost of about $125,000.

UNION PACIFIC SYSTEM.—Bids are being received for equipment to be used in repairing this company's tie-treating plant at The Dalles, Ore., which was damaged by fire on February 5. It is estimated that the cost of repairing the damage, which will be carried out by company forces, will be about $75,000.

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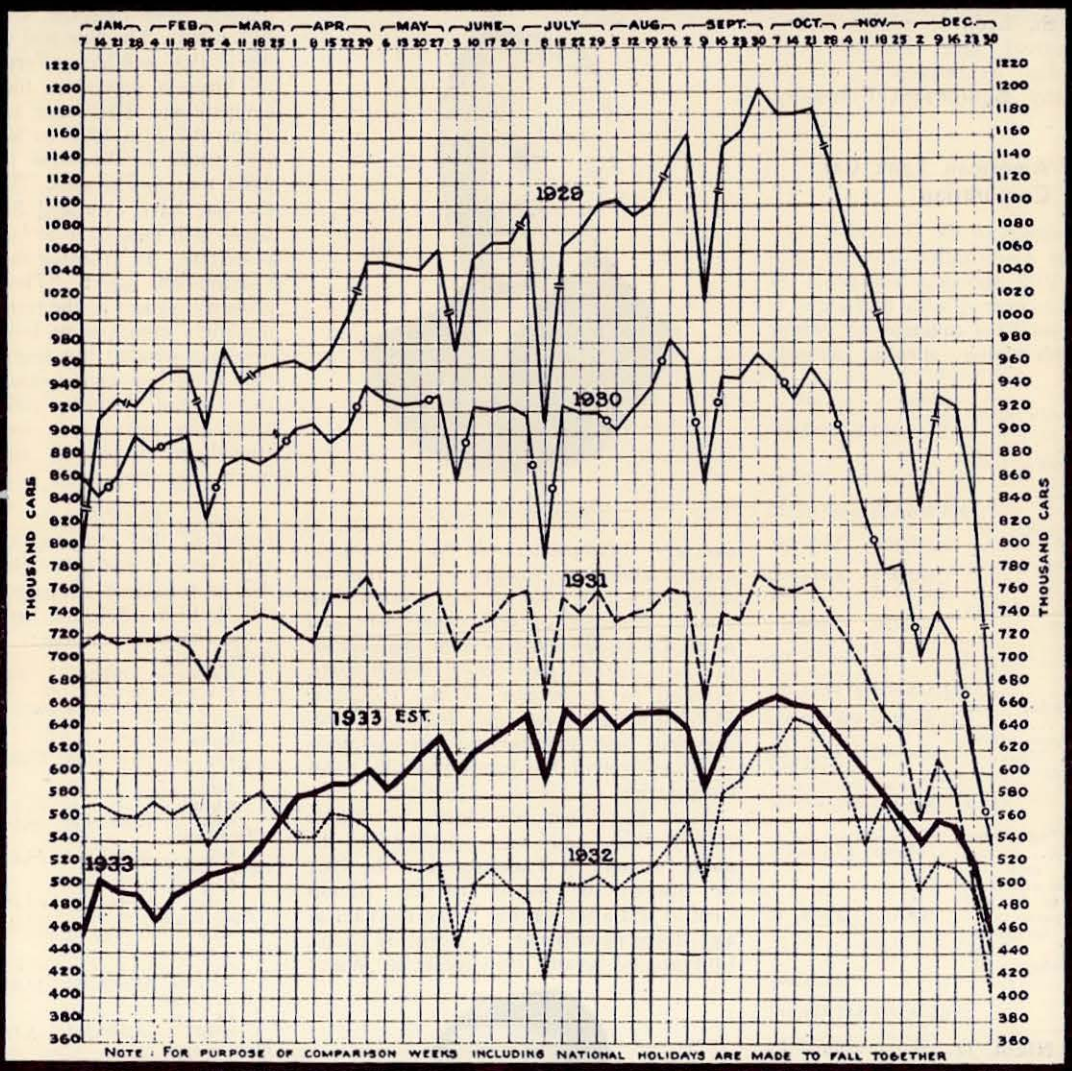
A PROPHECY



CARS OF REVENUE FREIGHT LOADED - ALL COMMODITIES - WEEKS ENDED SATURDAY

MR. John L. Kerr, railroad economist, estimated total carloadings for 1932 at 27,300,000 cars which was only 700,000 cars from the actual figure of 28,000,000 cars. His estimate for 1933 is 31,000,000 cars, or an increase of 17% over 1932. Mr. Kerr arrives at his estimates by studying each week of the previous year and ascertaining what commodities were the big factors in making up freight tonnage. Then by discussing each situation with specialists in that field, a surprisingly accurate comparative estimate is arrived at. The chart reproduced is what Mr. Kerr expects for 1933.

No question but what the recent bank holiday was not taken into consideration in making the 1933 curve, and therefore, 1933 actual will show a sharp dip for March. However, the restored confidence will no doubt be reflected later on in 1933 actual being above the 1933 estimate.

American Locomotive Company

30 Church Street New York N.Y.

Supply Trade

A. S. Kennedy has been appointed manager of a new branch office at Kansas City, Mo., of the **Chain Belt Company,** Milwaukee, Wis.

F. E. Smith, Ltd., Dominion Square building, Montreal, Que., has been appointed Canadian representative of the **Union Railway Equipment Company,** Chicago.

General American Tank Car Corporation

The annual report of the General American Tank Car Corporation and its subsidiaries for 1932 shows a net profit of $1,638,962, as compared with $4,011,268 in 1931. The consolidated summary of income and the consolidated surplus account follow:

	1932	1931
Gross income from sales, rentals, etc.	$17,958,042	$29,185,011
Add dividends, interest and other income from investments	448,608	963,201
	$18,406,650	$30,148,212
Less: Cost of sales, expenses and all taxes	10,220,873	19,664,796
Interest on car equipment notes	1,862,903	2,014,873
Depreciation	4,434,455	4,138,277
Provision for dividends of subsidiaries	249,457	318,999
	$16,767,688	$26,136,945
Net Profit	$ 1,638,962	$ 4,011,267
Balance — December 31, 1931	$43,894,918	$48,749,056
Net profit for year ended December 31, 1932	1,638,962	4,011,268
Sundry adjustments	.....	118,135
	$45,533,880	$52,878,459
Deductions		
Dividends paid and provided for	$745,648	$3,120,159
Adjustment of cost of treasury stock acquired during 1932 to $5 per share stated value	159,532	3,071,742
Write-down of securities to indicated market value, December 31, 1931	.....	2,791,641
	$44,628,699	$43,894,917

George A. Nicol, Jr., vice-president in charge of transportation and government sales for the **Johns-Manville Sales Corporation,** New York, has been appointed an executive vice-president. In addition to his responsibilities on transportation and government sales, Mr. Nicol will assume direction of the company's automotive sales, including the equipment, replacement and private-brand sections and direction of sales of filtration and filler materials. **John H. Trent** has been appointed general sales manager of transportation and government sales. **J. T. Spicer** will be general sales manager of the automotive department and **A. S. Elsenbast** general sales manager of filters and filler sales.

George A. Nicol, Jr., was born at Providence, R. I., and after attending Mount Pleasant Academy, English High School and Rhode Island School of Design, served a special apprenticeship at the Rhode Island Locomotive Works. Subsequently he was a locomotive designer with the American Locomotive Company until March, 1904, when he went to the Louisville & Nashville as locomotive designer, and later specialized in car design. From August, 1905, to 1909, he was with the Baltimore & Ohio as designing engineer in its mechanical department at Baltimore, Md. He then entered the service of the H. W. Johns-Manville Company, which later became the Johns-Manville Corporation, as railroad representative. Two years later he was transferred to the

George A. Nicol, Jr.

executive headquarters at New York as eastern assistant manager of its railroad department. In 1920 he was promoted to eastern manager of that department and in 1924 was appointed general manager of the railroad and government departments, as well as a director of the company. Mr. Nicol has served since 1928 as a vice-president and now becomes an executive vice-president of the Johns-Manville Sales Corporation.

John H. Trent was born in Meade county, Ky., and was educated in the public schools of Paducah, Ky. In 1901 he entered the service of the Illinois Central and after serving in the mechanical and stores departments at Burnside shops, Chicago, he became storekeeper at Water

John H. Trent

Valley, Miss., subsequently serving at Memphis, Tenn., and Paducah. Mr. Trent, who has been for over 25 years in the service of the Johns-Manville Sales Corporation and its predecessors, was serving as general sales manager of the western region, with headquarters at Chicago, at the time of his recent appointment as general sales manager of transportation and government sales.

Financial

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Abandonment.*—The Interstate Commerce Commission has authorized this company to abandon a 3-ft. gage line extending from Bellevue, Iowa, to Cascade, 35.7 miles. The line had a deficit of $66,000 in 1931 and has suffered not only from the business depression but from highway competition. Passenger revenues dropped from $1,777 in 1927 to $247 in 1931 and l.c.l. traffic in the same period fell from 2,384 tons to 750 tons. Tax payments on the line have averaged $10,000 per year, which will now have to be found by other taxpayers. In granting the application the Commission says: "The residents and property owners in the territory served will doubtless sustain some loss from the abandonment sought; but there is no evidence that, if the line were continued in operation, they would furnish sufficient traffic or accept an increase in freight rates high enough to make any material reduction in the operating loss."

ERIE.—*Annual Report.*—The 1932 annual report of this company shows net deficit after interest and other charges of $3,142,997, as compared with net deficit of $901,093 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Railway Operating Revenues	$73,746,074	$90,153,601	−$16,407,527
Maintenance of way	8,186,343	11,226,541	−3,040,198
Maintenance of equipment	15,222,434	18,149,615	−2,927,181
Transportation	26,851,174	34,336,925	−7,485,751
Total Operating Expenses	55,847,813	70,314,500	−14,466,687
Operating ratio	75.73	77.99	−2.26
Net Revenue from Operations	17,898,261	19,839,100	−1,940,839
Railway tax accruals	4,789,291	5,167,313	−378,022
Railway operating income	13,088,392	14,652,840	−1,564,448
Net equipment and joint facility rents — Dr.	4,258,046	4,300,738	−42,691
Net Railway Operating Income	8,830,345	10,352,102	−1,521,756
Non-operating income	4,274,439	4,554,604	−280,166
Gross Income	13,104,784	14,906,707	−1,801,922
Rent for leased roads	2,171,493	2,193,460	−21,966
Total Deductions from Gross Income	16,247,782	15,807,800	+439,981
Net Deficit.	$3,142,997	$901,093	+$2,241,904

PENNROAD CORPORATION.—*Fix Par Value of Stock.*—The voting trustees of this corporation have announced that all the shares of its no-par-value stock have been changed to a nominal par value of $1 each, effective March 20, which will reduce the transfer tax on one voting trust certificate, representing 100 shares of stock, from $8 in New York State to 8 cents and in Pennsylvania from $6 to 6 cents.

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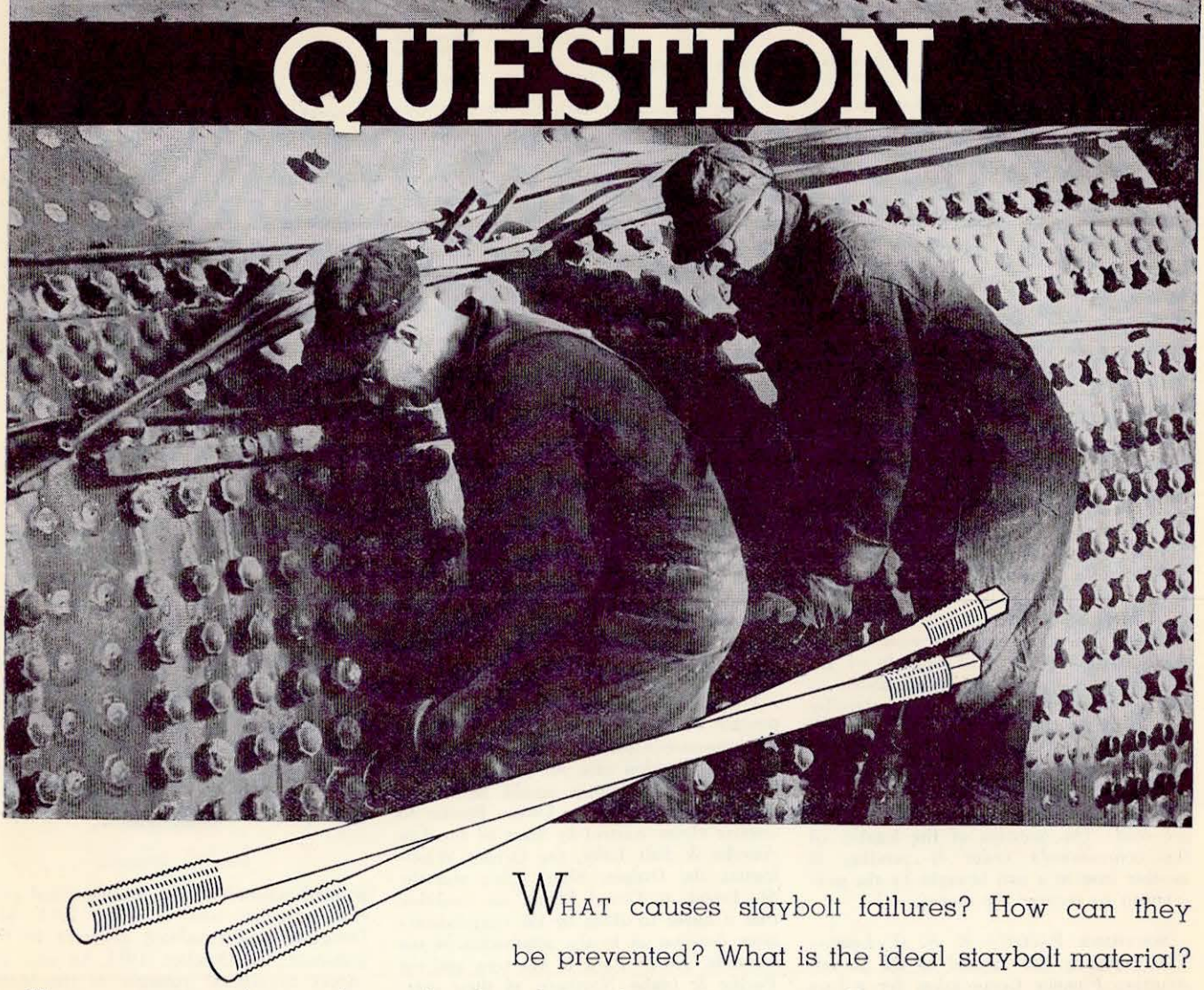
THE STAYBOLT QUESTION



WHAT causes staybolt failures? How can they be prevented? What is the ideal staybolt material? « These questions have plagued railroad men for generations. « By research over a period of many years Republic metallurgists have thrown much light on the subject of staybolts. This information has been gathered into a booklet, "The Staybolt Question" and is available to anyone interested. « This study of staybolts and development of staybolt material has made Republic the preferred source of supply for longer-lifed staybolts. In Agathon, Climax or Toncan Iron, Republic can supply a staybolt particularly fitted to meet your own conditions.

Toncan Iron Boiler Tubes, Pipe, Plates, Culverts, Rivets, Staybolts, Tender Plates and Firebox Sheets • Sheets and Strip for special railroad purposes • Agathon Alloy Steels for Locomotive Parts • Agathon Engine Bolt Steel • Agathon Iron for pins and bushings • Agathon Staybolt Iron • Climax Steel Staybolts • Upson Bolts and Nuts • Track Material, Maney Guard Rail Assemblies • Enduro Stainless Steel for dining car equipment, for refrigeration cars and for firebox sheets • Agathon Nickel Forging Steel.

The Birdsboro Steel Foundry & Machine Company of Birdsboro, Penna. has manufactured and is prepared to supply, under license, Toncan Copper Molybdenum Iron castings for locomotives.

CENTRAL ALLOY DIVISION

AGATHON NICKEL IRON

REPUBLIC STEEL CORPORATION

MASSILLON, OHIO

TONCAN COPPER MO-LYB-DEN-UM IRON

NEW YORK, SUSQUEHANNA & WESTERN. —*Annual Report.*—The 1932 annual report of this company shows net deficit after interest and other charges of $242,476, as compared with net deficit of $298,948 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Railway Operating Revenues	$3,738,020	$4,348,856	−$610,835
Maintenance of way	407,762	554,397	−146,635
Maintenance of equipment	663,328	665,230	1,902
Transportation	1,447,383	1,826,724	−379,342
Total Operating Expenses	2,710,664	3,265,084	−554,419
Operating ratio	72.52	75.08	−2.56
Net Revenue from Operations	1,027,356	1,083,772	−56,416
Railway tax accruals	364,191	382,865	−18,673
Railway operating income	660,795	697,988	−37,194
Net equipment and joint facility rents—Dr.	179,188	279,293	−100,105
Net Railway Operating Income	481,607	418,696	+62,911
Non-operating income	77,644	79,664	−2,020
Gross Income	559,251	498,360	+60,891
Rent for leased roads	26,478	26,301	+177
Total Deductions from Gross Income	801,727	797,309	+4,418
Net Deficit	$242,476	$298,948	−$56,472

RICHMOND, FREDERICKSBURG & POTOMAC. —*Recapture Case.*—The Supreme Court of the United States has refused to grant this company's petition for a review of the decision of the court of appeals of the District of Columbia which dismissed its bill for an order restraining the comptroller general of the United States from withholding money due the carrier for the transportation of mail as an offset against the amount which the Interstate Commerce Commission is seeking to recapture from the road. The question of the legality of the commission's order is pending in another case in a suit brought by the government to recover the money.

SOUTHERN PACIFIC.—*R. F. C. Loan.*—This company has applied to the Reconstruction Finance Corporation for a loan of $22,000,000 to be secured by pledge of bonds of subsidiary companies, for the purpose of paying maturing bonds and equipment trust obligations and interest and for other corporate purposes. The company submitted with its application an estimate that it will require $30,000,000 cash for the remainder of the year in addition to its estimated receipts, and it has made arrangements with various banks for borrowing part of the amount on 5 per cent demand notes.

SOUTHERN PACIFIC. — *Abandonment.* — This company and the Burro Mountain have applied to the Interstate Commerce Commission for authority to abandon the Tyrone Branch, from Burro Mountain Junction, N. M., to Tyrone, 13.07 miles.

SOUTHERN PACIFIC. — *Abandonment.* — This company and the Central Pacific have applied to the Interstate Commerce Commission for authority to abandon a portion of the Mina branch, from Tonopah Junction, Nev., to Tom, Calif., 76 miles, and the Mound House branch, from Churchill, Nev., to Mound House, 26 miles.

TENNESSEE CENTRAL.—*Annual Report.*—The 1932 annual report of this road shows net deficit after interest and other charges of $82,249, as compared with net deficit of $20,009 in 1931. Selected items from the Income Statement follow:

	1932	1931	Increase or Decrease
Railway Operating Revenues	$1,873,225	$2,603,511	−$730,286
Maintenance of way	293,315	468,849	−175,534
Maintenance of equipment	271,509	412,401	−140,892
Transportation	688,842	965,826	−276,984
Total Operating Expenses	1,455,162	2,100,068	−644,906
Operating ratio	77.68	80.66	2.98
Net Revenue from Operations	418,063	503,443	−85,380
Railway tax accruals	51,336	60,888	−9,552
Railway operating income	336,597	442,447	105,850
Equipment rents—Net Dr.	149,109	178,207	−29,098
Joint facility rents—Net Dr.	5,505	5,652	−147
Non-operating income	15,180	29,125	−13,945
Gross Income	381,777	471,571	.....
Rent for leased roads	62,504	62,504	.....
Interest on funded debt	228,846	228,412	+87,794
Total Deductions from Gross Income	464,027	491,581	−27,554
Net Deficit	$82,249	$20,009	+$62,240

TEXAS & PACIFIC. — *R. F. C. Loan.*—This company has applied to the Reconstruction Finance Corporation for a loan of $700,000 to meet maturities of general and refunding bonds and equipment trust certificates on April 1.

UNION PACIFIC.—*Unification.*—The Interstate Commerce Commission has denied this company's petition for a reargument in the unification case in which the commission found that it would be in the public interest for the Union Pacific to acquire closer control by lease of the Los Angeles & Salt Lake, the Oregon-Washington, the Oregon Short Line, and the St. Joseph & Grand Island on condition that it agree to abide by the commission's later decision as to the acquisition of the Laramie, North Park & Western and the Pacific & Idaho Northern at their commercial value, or the operation thereof.

Average Prices of Stocks and of Bonds

	Mar. 21	Last week	Last year
Average price of 20 representative railway stocks	25.71	....	29.09
Average price of 20 representative railway bonds	54.17	....	69.10

Dividends Declared

Carolina Clinchfield & Ohio.—$1.00, quarterly; Stamped Certificates, $1.25, quarterly, both payable April 10 to holders of record March 31.

Joliet & Chicago.—7 Per Cent Guaranteed, $1.75, payable April 3 to holders of record March 22.

Kansas City Southern.—Preferred, 50c. quarterly, payable April 15 to holders of record March 31.

Mahoning Coal R.R.—Common, $6.24, quarterly, payable May 1 to holders of record April 12.

New London Northern.—$2.25 quarterly, payable April 1 to holders of record March 15.

Norwich & Worcester.—Preferred, $2.00, quarterly, payable April 1 to holders of record March 15.

Philadelphia & Trenton.—$2.50 quarterly, payable April 10 to holders of record March 29.

Providence & Worcester.—$2.50, payable April 1 to holders of record March 8.

Sharon.—2½ per cent, semi-annually, payable April 1 to holders of record March 21.

Vermont & Massachusetts.—$3.00, semi-annually, payable April 7 to holders of record March 14.

Railway Officers

EXECUTIVE

Dana C. Douglass, vice-president and general manager of the Maine Central, has been appointed executive vice-president with supervision over all operating activities including traffic and accounting. Mr. Douglass was born at Leeds, Me., on February 2, 1877, and received a public school education. He entered railway service in July, 1894, with the Maine Central as a stenographer in the passenger department. From September 1894 to July, 1898, he was clerk and stenographer in the general manager's office and on the latter date he was appointed secretary to the general manager. In February, 1910, he was appointed assistant to vice-president and general manager, and in July, 1913, Mr. Douglass was appointed assistant to the president. In October, 1913, he was advanced to general manager of the Maine Central and Portland Terminal Company and from November, 1918, to March, 1920, he was Federal manager of the same companies. In March, 1920, when the road was returned to private ownership Mr. Douglass was appointed vice-president and general manager, and in 1930 he was elected a director of the road. He is also a director of the SamOset Company and vice-president of the Main Central Transportation Company, both of which are Maine Central subsidiaries.

Dana C. Douglass

TRAFFIC

D. G. Paish has been appointed traveling industrial agent of the Delaware & Hudson, with headquarters at Albany, N. Y.

E. J. Falk, assistant general freight agent on the Missouri Pacific at St. Louis, Mo., has been appointed executive general agent with headquarters at San Antonio, Tex., succeeding **L. S. Goforth,** deceased.

A. C. Atkinson, assistant traffic manager of the Litchfield & Madison, with headquarters at Chicago, has had his juris-

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VERTICAL *and* LATERAL PLAY *ceases to be a* PROBLEM

FRICTIONAL wear has a tough job trying to make an impression on Crosshead Shoes made of HUNT-SPILLER *Air Furnace* GUN IRON.

Inspectors seldom have to report vertical or lateral play between the crossheads and guides. Records show greater mileage between guide adjustments and lower maintenance costs for practically all parts of the running gear.

The wear-resisting qualities of HUNT-SPILLER *Air Furnace* GUN IRON help to keep out those disastrous crosshead pounds which literally tear a locomotive to pieces.

HSGI
Reg. U. S. Trade Mark

Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings

Parts Finished For Application

Dunbar Sectional Type Packing
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(Duplex Springs for Above Sectional Packing)
Cylinder Snap Rings
Valve Rings All Shapes

HUNT-SPILLER MFG. CORPORATION
J. G. Platt, Pres. & Gen. Mgr. V. W. Ellet, Vice-President.

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383 Dorchester Ave. South Boston, 27, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 997 Aqueduct St., Montreal, P. Q.
Export Agent for Latin America:
International Rwy. Supply Co., 30 Church Street, New York, N. Y.

HUNT-SPILLER *Air Furnace* GUN IRON

diction extended to include a portion of the duties formerly assigned to the late **Ernest F. Randall,** assistant traffic manager at St. Louis, Mo.

W. T. Westbrook, commercial agent of the Louisville & Nashville, with headquarters at Chicago, has been promoted to general agent at St. Louis, Mo., to succeed **E. H. Wigand,** who has been transferred to Cleveland to replace **C. F. Stith.** Mr. Stith, who has been transferred to Chicago, succeeds **M. C. Browning,** who has been appointed division freight agent at Atlanta, Ga., to replace **J. F. Hartsough,** deceased.

FINANCIAL, LEGAL AND ACCOUNTING

T. B. Barry, assistant freight claim agent of the Western Pacific, has been promoted to freight claim agent, with headquarters as before at San Francisco, Cal., succeeding **W. F. Whiteman,** who has resigned.

ENGINEERING AND SIGNALING

H. I. Hoag has been appointed division engineer of the Pennsylvania division of the New York Central with headquarters at Jersey Shore, Pa., succeeding **S. A. Seely,** deceased.

Paul M. La Bach, engineer of water service of the Chicago, Rock Island & Pacific, with headquarters at Chicago, will retire from active service on April 1, and the position of engineer of water service will be abolished. Mr. La Bach was born on October 5, 1876, at New York City and graduated from the United States Naval Academy. Subsequently he received the degree of LL.B. from the University of Tennessee and a degree in civil engineering from the University of Cincinnati. He entered railway service in 1899 as an assistant engineer on construction on the Baltimore & Ohio, and in 1900 he went to the Chicago & Alton (now the Alton) as an assistant engineer. In 1902, Mr. La Bach entered private practice to engage in mining exploration work and two years later he re-entered railroad service as assistant chief engineer of construction on the Western Maryland. In 1906 he went to the Rock Island as an assistant engineer, remaining with this company for four years at the end of which time he went to the United States War Department as an assistant engineer. Mr. La Bach returned to the Rock Island in 1911 as engineer of water service which position he has continued to hold except for a period during the World War when he served as a major of engineers with the A. E. F. in France.

PURCHASES AND STORES

W. G. Black, assistant vice-president of the Chesapeake & Ohio and the Pere Marquette, with jurisdiction over the purchases and stores and mechanical departments of the former and the purchases and stores department of the latter, has had his jurisdiction extended to include supervision of the purchases and stores department of the New York, Chicago & St. Louis. Mr. Black's headquarters is at Cleveland, Ohio.

OBITUARY

Alexander McGary, chief electrician of the New York Central, with headquarters at New York, died on March 20 at Union Hospital, New York.

William Mosby, formerly superintendent of transportation of the St. Louis Southwestern, who retired as car accountant of this company early in 1932, died at Tyler, Tex., on March 4.

Charles B. Adams, who resigned in 1905 as superintendent of transportation of the Wabash, with headquarters at St. Louis, Mo., and who later became connected with the Safety Car Heating & Lighting Co., died on March 19, in his home at Ferguson, Mo., at the age of 73 years.

Warren S. Hayden, president of the Cleveland Union Terminals and a member of the firm of Hayden, Miller & Company, Cleveland investment concern, died on March 14, following an operation for appendicitis.

A. M. Ingersoll, who retired from railroad service in 1918 as vice-president of the Chicago, Milwaukee & St. Paul (now the Chicago, Milwaukee, St. Paul & Pacific), with headquarters at Tacoma, Wash., died in that city on March 14. Mr. Ingersoll entered railway service in 1868, on the Milwaukee, and for the next 20 years served in various positions with the road, including that of general agent, passenger department, at Milwaukee, Wis. In 1890 he became president of the Tacoma Warehouse & Elevator Company at Tacoma, and in 1906 he returned to the Milwaukee to serve in an advisory capacity. In 1908, Mr. Ingersoll was elected vice-president of a Milwaukee subsidiary, the Chicago, Milwaukee & St. Paul of Washington, and he remained in this capacity with the successor road, the Chicago, Milwaukee & Puget Sound. On January 1, 1913, he was elected vice-president of the Milwaukee at Tacoma, which position he continued to hold until 1918, when he left railway service. At the time of his death, Mr. Ingersoll was president of the Pacific Stevedoring Company.

C. A. Hayes, formerly vice-president in charge of traffic of the Canadian National, died at his home in St. Catherine, Que., Canada, on March 21. Mr. Hayes was born on March 10, 1865, at West Springfield, Mass., and received his education at Amherst College, Mass. He began railway work in April, 1882, and held various positions in clerical capacity in the accounting and general freight departments of the Boston & Maine, at Springfield and at Boston, Mass., until November, 1890. He was then to June, 1892, general freight and passenger agent of the Central New England & Western (now New York, New Haven & Hartford), at Poughkeepsie, N. Y., and from June to October, 1892, he served as division freight agent of the Philadelphia & Reading, at Hartford, Conn. In October, 1892, he entered the service of the Grand Trunk as New England agent, at Boston, Mass., of its National Despatch Fast Freight Line, in 1896, becoming manager of the same line, with office at Boston, which was later removed to Buffalo. On May 1, 1903, he was appointed assistant general freight agent of the Grand Trunk, at Chicago. In May, 1908, he was promoted to general freight agent at Montreal, and in September, 1911, was appointed freight traffic manager. In July, 1913, he was appointed general traffic manager of the Canadian Government Railways at Moncton, N. B., and in June, 1917, he became general manager of the Canadian Government Railways, eastern lines, at Moncton, N. B. In November, 1918, he was appointed vice-president in charge of traffic of the Canadian Northern and the Canadian Government Railways, now the Canadian National. For a short period before his retirement Mr. Hayes served as general manager of the express department.

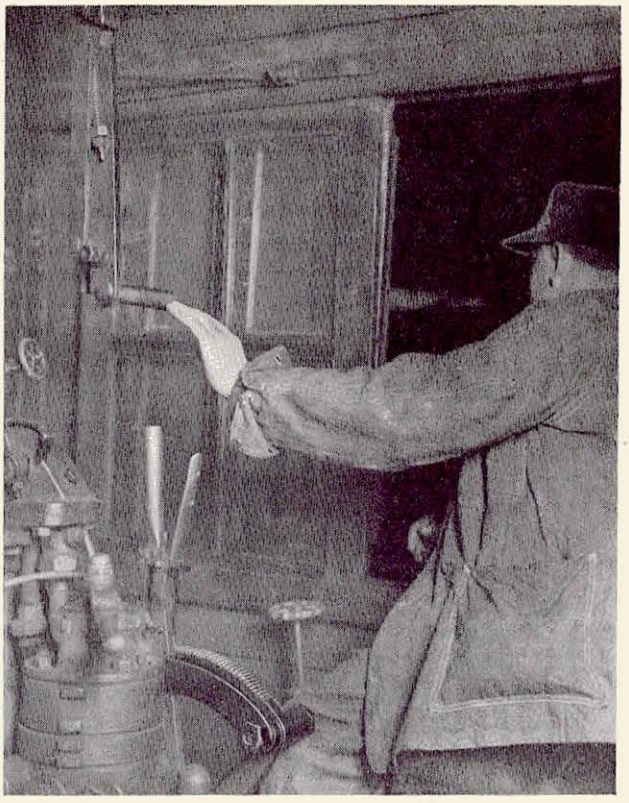
Nicholas H. Young, retired superintendent of the St. Louis (Mo.) terminal division of the Chicago, Burlington & Quincy, who died at St. Louis on March 1, had served the Burlington in various capacities for 43 years. He was born on November 24, 1867, at New London, Iowa, and entered the service of the Burlington on April 1, 1886, as a yard clerk at Grand Crossing, Wis., serving in this position and as agent and yard clerk and agent until October, 1897, when he was appointed cashier in the freight office at La Crosse, Wis. In August, 1901, he was appointed

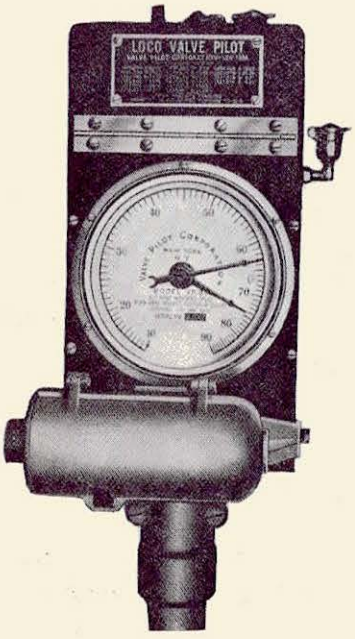
Nicholas H. Young

traveling auditor at La Crosse, which position he held until May, 1903, when he was appointed chief clerk in the freight office at St. Paul, Minn., where he was advanced to agent in August, 1904. A year later Mr. Young was appointed trainmaster at Minneapolis, Minn., and in April, 1908, he was promoted to superintendent of terminals at St. Louis, being transferred to Chicago in September, 1910. In 1917 he was appointed superintendent of the Burlington division with headquarters at Burlington, Iowa, and in 1921 he was transferred to the Brookfield division at Brookfield, Mo. In the following year Mr. Young was again sent to St. Louis as superintendent of terminals where he remained until his retirement on January 1, 1929.

THE ELUSIVE NOTCH

Will the Engineer Use Throttle or Reverse Gear?





IN spite of good intentions and years of experience the engineer has no way of knowing which reverse lever notch will give maximum power or greatest fuel economy.

LOCO VALVE PILOT finds the exact notch, indicates it to him visually and records its selection and use.

The money-saving importance of using the correct notch is very evident when you consider that an error of one per cent in cut-off means a loss of several hundred pounds of coal in the average 100 mile run.

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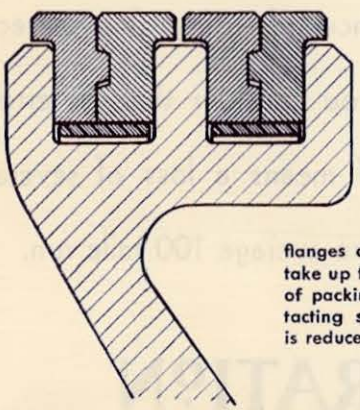
use American Sectional Piston Packing

Flexibility permits American Sectional Piston packing to conform to badly worn oversize and out-of-round cylinders. Tapered tongue and groove keep the packing tight against the sides of the piston groove. Tongue and groove construction also prevents packing rings catching in counter bore should piston over travel.

A crimped alloy steel expander spring keeps the packing tight against the cylinder at all times. The follow up of this type of spring assures tight packing on installation and after long use when the greatest amount of wear may have taken place.



FLANGED TYPE *for* **TURNED DOWN PISTONS**

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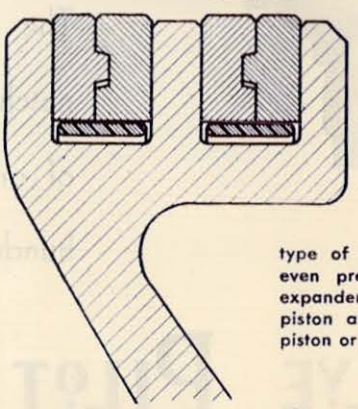

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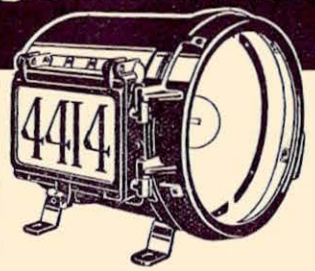

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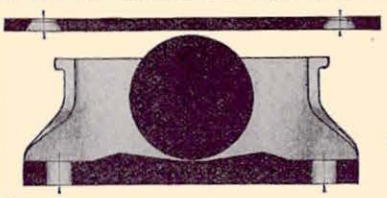

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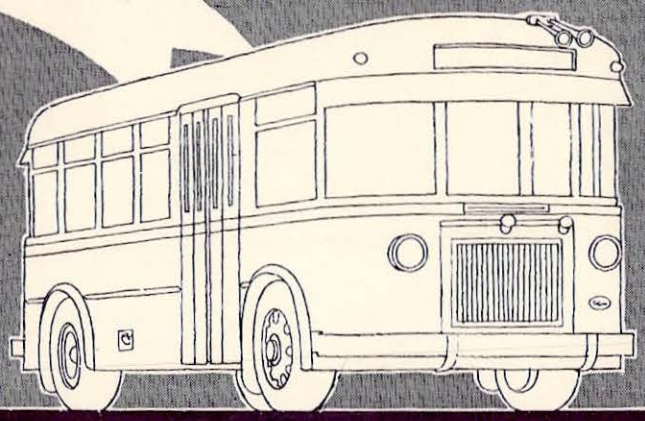

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